



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

June 12, 2015

Jeff Thomas  
President & CEO  
Selective Micro Technologies  
6200 Avery Road – Suite A  
Dublin, OH 43016

Subject: PRIA Label Amendment – Revised Activation Times, Addition of an Organism  
Product Name: Selectocide 5G  
EPA Registration Number: 74986-5  
Application Date: November 3, 2014  
Decision Number: 497031

Dear Mr. Thomas:

The amended label referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act, as amended, is acceptable. This approval does not affect any conditions that were previously imposed on this registration. You continue to be subject to existing conditions on your registration and any deadlines connected with them.

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. You must submit one copy of the final printed labeling before you release the product for shipment with the new labeling. In accordance with 40 CFR 152.130(c), you may distribute or sell this product under the previously approved labeling for 18 months from the date of this letter. After 18 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently approved labeling. “To distribute or sell” is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR 152.3.

Should you wish to add/retain a reference to the company’s website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product’s label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA’s Office of Enforcement and Compliance.

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EPA Reg. No. 74986-5  
Decision No. 497031

Your release for shipment of the product constitutes acceptance of these conditions. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6. If you have any questions, please contact Wanda Henson by phone at (703) 308-6345 or via email at [henson.wanda@epa.gov](mailto:henson.wanda@epa.gov).

Sincerely,

A handwritten signature in black ink, appearing to read "D. Fuller", with a long horizontal stroke extending to the right.

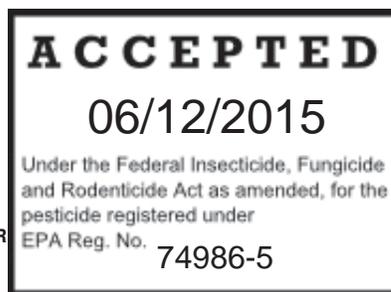
Demson Fuller, Product Manager 32  
Regulatory Management Branch II  
Antimicrobials Division (7510P)  
Office of Pesticide Programs

Enclosure

TO OPEN CUT ON DOTTED LINE



ALTERNATE BRAND NAMES: Selectroicide®12G, Selectroicide®1G,  
SelectroFresh™12G Food Processing



**DISINFECTANT/SANITIZER/TUBERCULOCIDE/VIRUCIDE\*/FUNGICIDE/ALGAECIDE/SLIMICIDE/DEODORIZER**

[PRODUCES 10 LITERS 500PPM CHLORINE DIOXIDE SOLUTION WHEN ACTIVATED FOR SELECTROICIDE®5G]  
[PRODUCES 24 LITERS 500PPM CHLORINE DIOXIDE SOLUTION WHEN ACTIVATED FOR SELECTROICIDE® 12G]  
[PRODUCES 2 LITERS 500PPM CHLORINE DIOXIDE SOLUTION WHEN ACTIVATED FOR SELECTROICIDE® 1G]  
[PRODUCES 1.5 LITERS 800PPM CHLORINE DIOXIDE SOLUTION WHEN ACTIVATED FOR SELECTROICIDE® 1G]  
[PRODUCES 24 LITERS 500PPM CHLORINE DIOXIDE SOLUTION WHEN ACTIVATED FOR SELECTROFRESH® 12G  
FOOD PROCESSING]

When used as directed, this chlorine dioxide-generating product is proven effective as: a **disinfectant** against *Pseudomonas aeruginosa*, *Staphylococcus aureus*, *Salmonella enterica*, methicillin-resistant *S. aureus* (MRSA), vancomycin-resistant *Enterococcus faecalis*, *Mycobacterium bovis* (TB), *Trichophyton mentagrophytes* (athlete's foot), *Listeria monocytogenes*, and *Candida albicans*; a **sanitizer** against *E. coli* (ad *E. coli* O157:H7), *S. aureus*, *Salmonella typhimurium* (MDRS), *Klebsiella pneumonia*, and *Listeria monocytogenes*; a **fungicide** against *Penicillium digitatum*, *Botrytis Sp.*, and *Fusarium solani*; and an **algaecide** (*Phormidium boneri*).  
**\*Viruses:** *Corona virus*, *Feline Calicivirus*, *Hepatitis A virus*, *Human Immunodeficiency virus type 1* (HIV-1), *Poliovirus-1*, *Rotavirus*, *Influenza-A virus*, *Rhinovirus type 37*, *Canine Parvovirus*, *Adenovirus type 5*, *Herpes Simplex virus type 2*, *Vaccinia virus*, and *Norovirus* (*feline calici* used as testing surrogate); \*Kills Pandemic 2009 H1N1 Influenza A virus (formerly called swine flu).  
See Technical Bulletin (page 5) for ATCC designation numbers of the above-listed organisms.

**KEEP OUT OF REACH OF CHILDREN**

**DANGER**

(See back panel for other cautions)

Active Ingredient:

Sodium Chlorite:.....30.5%  
Other Ingredients:.....69.5%  
Total:.....100.0%

[Amount of Chlorine Dioxide generated = 0.05% in 10 liters of water For Selectroicide® 5G]  
[Amount of Chlorine Dioxide generated = 0.05% in 24 liters of water For Selectroicide® 12G]  
[Amount of Chlorine Dioxide generated = 0.05% in 2 liters of water For Selectroicide® 1G]  
[Amount of Chlorine Dioxide generated = 0.08% in 1.5 liters of water For Selectroicide® 1G]  
[Amount of Chlorine Dioxide generated = 0.05% in 24 liters of water For SelectroFresh® 12G Food Processing]

Net Weight of contents.....2.52 ounces (71.30 grams)

FIRST AID
<b>If in Eyes:</b> Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.
<b>If on Skin or Clothing:</b> Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.
<b>If Swallowed:</b> Call poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person.
<b>If Inhaled:</b> Remove victim to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or doctor for treatment advice. Get medical attention.

Have the product container or label with you when calling a poison control center, doctor, or going for treatment. For emergency information concerning this product, call the National Pesticides Information Center (NPIC Web site: [www.npic.orst.edu](http://www.npic.orst.edu)).

**Note to Physician:** Probable mucosal damage may contraindicate the use of gastric lavage.

EPA Registration No. 74986-5      EPA Establishment No. 071441-OH-004 [090569-OH-001]

Manufactured for: Selective Micro Technologies, LLC    6200 Avery Rd. Suite A    Dublin, OH 43016    [www.selectivemicro.com](http://www.selectivemicro.com)

## **PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS**

**DANGER:** DRY INGREDIENTS: CORROSIVE. CAUSES IRREVERSIBLE EYE DAMAGE AND CAUSES SKIN BURNS. HARMFUL IF SWALLOWED. WEAR PROTECTIVE EYEWEAR (GOGGLES, FACE SHIELD OR SAFETY GLASSES). WEAR PROTECTIVE GLOVES. IF CONTACT WITH DRY INGREDIENTS OCCURS, WASH THOROUGHLY WITH SOAP AND WATER AFTER HANDLING AND BEFORE EATING, DRINKING, CHEWING GUM, USING TOBACCO OR USING THE TOILET. REMOVE CONTAMINATED CLOTHING AND WASH BEFORE REUSE.

**NOTE:** THIS PRODUCT IS DESIGNED TO FULLY COMPARTMENTALIZE DRY INGREDIENTS INSIDE A HYDROPHOBIC ENVELOPE. UNDER NORMAL USE CONDITIONS AND UNLESS SEALED PRODUCT ENVELOPE IS COMPROMISED, CONTACT WITH DRY INGREDIENTS SHOULD NOT OCCUR. HOWEVER, IF SEALED PRODUCT ENVELOPE IS COMPROMISED AND THE POTENTIAL FOR CONTACT WITH DRY INGREDIENTS OCCURS, THE ABOVE PRECAUTIONARY STATEMENT SHOULD BE FOLLOWED.

## **PHYSICAL OR CHEMICAL HAZARDS**

DRY SODIUM CHLORITE IS INCOMPATIBLE WITH ACIDS, REDUCING AGENTS, COMBUSTIBLE MATERIALS, SULFUR-CONTAINING RUBBER, SOLVENTS AND PAINTS. KEEP ACTIVATED SOLUTION FROM LIGHT AND HEAT. CHLORINE DIOXIDE GAS MAY CONCENTRATE IN OPEN SPACE OF CONTAINER IN WHICH 5G ENVELOPE IS ACTIVATED. ALWAYS DILUTE ACTIVATED PRODUCT IN WELL-VENTILATED AREA. DO NOT REMOVE 5G FROM CONTAINER OF WATER PRIOR TO COMPLETE GENERATION—10 HOURS AFTER IMMERSION IN WATER.

**NOTE:** For use in the institutional or commercial applications discussed below and in the accompanying Technical Bulletin.

When used as directed, on hard, non-porous surfaces (e.g., stainless steel, brass, glass, vinyl, PVC, polypropylene), this product is an effective sanitizer, disinfectant, tuberculocide, virucide\*, fungicide, algacide, general-purpose antimicrobial and cleaner for use in a wide range of applications, including but not limited to: hospitals; medical & veterinary facilities; pharmaceutical production facilities, including equipment (e.g., ultracentrifuges); wineries, breweries, and beverage / bottling plants; laboratories and other clinical settings; potable and non-potable water systems and attendant equipment & tubing; restaurants and food processing plants; and greenhouses/horticultural settings. Heavily soiled surfaces must be pre-cleaned prior to treatment. Apply by mop, sponge, or sprayer, ensuring visible wetness for times specified for these applications, or apply through immersion or clean-in-place application. Wear a NIOSH/MHSA-approved respirator appropriate for chlorine dioxide when using a high-pressurized sprayer and under other circumstances detailed in the Technical Bulletin.

## **SPECIAL INSTRUCTIONS FOR CLEANING AND DECONTAMINATING SURFACES AND OBJECTS PREVIOUSLY SOILED WITH BLOOD BODY FLUIDS POTENTIALLY CONTAINING HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (HIV-1) (at 100 ppm/10 min. contact time)**

- Wear protective barriers such as disposable latex gloves, gowns, masks, and eye coverings when handling items soiled with blood or body fluids.
- Blood and other body fluids must be thoroughly cleaned from surfaces and objects before application of Selectroicide 5G.
- Blood, other body fluids, and contaminated cleaning materials should be autoclaved and disposed of according to local regulations for infectious waste disposal.

**DIRECTIONS FOR USE:** IT IS A VIOLATION OF FEDERAL LAW TO USE THIS PRODUCT IN A MANNER INCONSISTENT WITH THE LABELING. READ THE ENTIRE LABEL AND USE STRICTLY IN ACCORDANCE WITH PRECAUTIONARY STATEMENTS AND USE.

## **FOR PRODUCT SIZE 71.30 GRAMS.**

### **Selectroicide® 5G:**

1. Open the package, ensuring the 5G envelope inside is not cut. Discard desiccant.
2. To achieve an aqueous solution of 500 ppm chlorine dioxide, immerse (submerge) the 5G envelope in container with 10 liters of water. [To achieve an aqueous solution of 100 ppm chlorine dioxide directly, immerse (submerge) the 5G envelope in container with 50 liters of water.] Close/seal container tightly. Container interior should be dark and resistant to oxidation. See Technical Bulletin for recommendations regarding amount of water, contact times and dilutions for specific applications, and recommended container specifications.
3. **WAIT AT LEAST 10 HOURS BEFORE USE TO ENSURE SOLUTION REACHES FULL STRENGTH.**  
DO NOT REMOVE 5G FROM CONTAINER OF WATER PRIOR TO 10 HOURS.
4. Remove 5G from container and mix gently before use. Work in well-ventilated area and avoid inhaling fumes. Wear protective gloves if hands will come into contact with activated solution during dilution or application; wear NIOSH/MHSA-approved respirator for chlorine dioxide if working with stock (500 ppm) solution in open container. Remove envelope from container within 48 hours after activation. Do not reuse the 5G. Discard envelope according to instructions below. Before use, verify concentration with *Selective Micro® Chlorine Dioxide Test Strips* to ensure appropriate concentration (see Technical Bulletin for directions if *Test Strips* indicate lower-than-desired concentration).
5. Activate prior to expiration date stamped on package. Store unused solution (and/or subsequent dilutions) in a dark, oxidation-resistant closed or sealed container. Record activation date and concentration on stick-on label shipped with the product, and affix to storage container. Store activated solution in cool place out of direct sunlight (do not store in refrigerator dedicated to food storage). Use solution and/or subsequent dilutions within 15 days of activation.  
Note: Verify concentration using *Selective Micro® Test Strips*. For concentrations above 10ppm, use *Selective Micro® Wide Range* test strips; for concentrations of 10ppm or less, use *Selective Micro® Low Range* test strips.

## **USE THE FOLLOWING GENERAL DILUTIONS AND TABLE**

General Dilution Instructions: All dilutions begin with a stock solution at a nominal concentration of 500 ppm, except when the product is activated directly to the application concentration (see technical bulletin). Except where otherwise directed, or for other use concentrations (see technical bulletin), use the following dilution instructions to achieve the use concentration indicated:

To Achieve Use Concentration of:	Use Dilution Device or Sprayer With a Dilution Ratio of:
100 ppm	1:5 (one part 500 ppm solution to 4 parts water)
50 ppm	1:10 (one part 500 ppm solution to 9 parts water)
20 ppm	1:25 (one part 500 ppm solution to 24 parts water)
5 ppm	1:100 (one part 500 ppm solution to 99 parts water)
0.25 ppm	1:2,000 (one part 500 ppm solution to 1,999 parts water)

**FOR PRODUCT SIZE 153.6 GRAMS, Selectroicide® 12G:**

1. Open the package, ensuring the 12G envelope inside is not cut. Discard desiccant.
  2. To achieve an aqueous solution of 500 ppm chlorine dioxide, immerse (submerge) the 12G envelope in container with 24 liters of water. [To achieve an aqueous solution of 100 ppm chlorine dioxide directly, immerse (submerge) the 12G envelope in container with 120 liters of water.] Close/seal container tightly. Container interior should be dark and resistant to oxidation. See Technical Bulletin for recommendations regarding amount of water, contact times and dilutions for specific applications, and recommended container specifications.
  3. **WAIT AT LEAST 2 HOURS BEFORE USE TO ENSURE SOLUTION REACHES STANDARD FULL STRENGTH 500 PPM.** MAY REMOVE FROM CONTAINER AFTER 2 HOURS FOR STANDARD LABEL USE.
  4. Remove 12G from container and mix gently before use. Work in well-ventilated area and avoid inhaling fumes. Wear protective gloves if hands will come into contact with activated solution during dilution or application; wear NIOSH/MHSA-approved respirator for chlorine dioxide if working with stock (500 ppm) solution in open container. Remove envelope from container within 24 hours after activation. Do not reuse the 12G. Discard envelope according to instructions below. Before use, verify concentration with *Selective Micro® Chlorine Dioxide Test Strips* to ensure appropriate concentration (see Technical Bulletin for directions if *Test Strips* indicate lower-than-desired concentration).
  5. Activate prior to expiration date stamped on package. Store unused solution (and/or subsequent dilutions) in a dark, oxidation-resistant closed or sealed container. Record activation date and concentration on stick-on label shipped with the product, and affix to storage container. Store activated solution in cool place out of direct sunlight (do not store in refrigerator dedicated to food storage). Use solution and/or subsequent dilutions within 15 days of activation.
- Note: Verify concentration using *Selective Micro® Test Strips*. For concentrations above 10ppm, use *Selective Micro® Wide Range* test strips; for concentrations of 10ppm or less, use *Selective Micro® Low Range* test strips.

**USE THE FOLLOWING GENERAL DILUTIONS AND TABLE**

General Dilution Instructions: All dilutions begin with a stock solution at a nominal concentration of 500 ppm, except when the product is activated directly to the application concentration (see technical bulletin). Except where otherwise directed, or for other use concentrations (see technical bulletin), use the following dilution instructions to achieve the use concentration indicated:

To Achieve Use Concentration of:	Standard Use Dilution Device or Sprayer With a Dilution Ratio of:
100 ppm	1:5 (one part 500 ppm solution to 4 parts water)
50 ppm	1:10 (one part 500 ppm solution to 9 parts water)
20 ppm	1:25 (one part 500 ppm solution to 24 parts water)
5 ppm	1:100 (one part 500 ppm solution to 99 parts water)
0.25 ppm	1:2,000 (one part 500 ppm solution to 1,999 parts water)

**FOR PRODUCT SIZE 12.34 GRAMS, Selectroicide® 1G:**

1. Open the package, ensuring the 1G envelope inside is not cut. Discard desiccant.
  2. To achieve an aqueous solution of 500 ppm chlorine dioxide, immerse (submerge) the 1G envelope in container with 2 liters of water. [To achieve an aqueous solution of 100 ppm chlorine dioxide directly, immerse (submerge) the 1G envelope in container with 10 liters of water.] Close/seal container tightly. Container interior should be dark and resistant to oxidation. See Technical Bulletin for recommendations regarding amount of water, contact times and dilutions for specific applications, and recommended container specifications.
  3. **WAIT AT LEAST 2 HOURS BEFORE USE TO ENSURE SOLUTION REACHES STANDARD FULL STRENGTH 500 PPM.** **WAIT AT LEAST 4 HOURS BEFORE USE TO ENSURE SOLUTION REACHES MAXIMUM STRENGTH 800 PPM.** MAY REMOVE FROM CONTAINER AFTER 2 HOURS FOR STANDARD LABEL USE. MAY REMOVE FROM CONTAINER AFTER 4 HOURS FOR LABEL USE as a bactericide against carbapenem-resistant enterobacteriaceae: klesiella pneumoniae (crkp).
  4. Remove 1G from container and mix gently before use. Work in well-ventilated area and avoid inhaling fumes. Wear protective gloves if hands will come into contact with activated solution during dilution or application; wear NIOSH/MHSA-approved respirator for chlorine dioxide if working with stock (500 ppm) solution in open container. Remove envelope from container within 24 hours after activation. Do not reuse the 1G. Discard envelope according to instructions below. Before use, verify concentration with *Selective Micro® Chlorine Dioxide Test Strips* to ensure appropriate concentration (see Technical Bulletin for directions if *Test Strips* indicate lower-than-desired concentration).
  5. Activate prior to expiration date stamped on package. Store unused solution (and/or subsequent dilutions) in a dark, oxidation-resistant closed or sealed container. Record activation date and concentration on stick-on label shipped with the product, and affix to storage container. Store activated solution in cool place out of direct sunlight (do not store in refrigerator dedicated to food storage). Use solution and/or subsequent dilutions within 15 days of activation.
- Note: Verify concentration using *Selective Micro® Test Strips*. For concentrations above 10ppm, use *Selective Micro® Wide Range* test strips; for concentrations of 10ppm or less, use *Selective Micro® Low Range* test strips.

**USE THE FOLLOWING GENERAL DILUTIONS AND TABLE**

General Dilution Instructions: All dilutions begin with a stock solution at a nominal concentration of 500 ppm, except when the product is activated directly to the application concentration (see technical bulletin). Except where otherwise directed, or for other use concentrations (see technical bulletin), use the following dilution instructions to achieve the use concentration indicated:

To Achieve Use Concentration of:	Standard Use Dilution Device or Sprayer With a Dilution Ratio of:
100 ppm	1:5 (one part 500 ppm solution to 4 parts water)

50 ppm	1:10 (one part 500 ppm solution to 9 parts water)
20 ppm	1:25 (one part 500 ppm solution to 24 parts water)
5 ppm	1:100 (one part 500 ppm solution to 99 parts water)
0.25 ppm	1:2,000 (one part 500 ppm solution to 1,999 parts water)
<b>To Achieve Use Concentration of:</b>	<b>Bactericide against carbapenem-resistant Enterobacteriaceae: Klebsiella pneumonia (CRKP)</b>
800 ppm	Generate (1) 1G in 1.5 liters of water for 4 hours

**FOR PRODUCT SIZE 153.6 GRAMS, SELECTROFRESH™ 12G FOOD PROCESSING:**

1. Open the package, ensuring the 12G envelope inside is not cut. Discard desiccant.
  2. To achieve an aqueous solution of 500 ppm chlorine dioxide, immerse (submerge) the 12G envelope in container with 24 liters of water. [To achieve an aqueous solution of 100 ppm chlorine dioxide directly, immerse (submerge) the 12G envelope in container with 120 liters of water.] Close/seal container tightly. Container interior should be dark and resistant to oxidation. See Technical Bulletin for recommendations regarding amount of water, contact times and dilutions for specific applications, and recommended container specifications.
  3. **WAIT AT LEAST 2 HOURS BEFORE USE TO ENSURE SOLUTION REACHES FULL STRENGTH. DO NOT REMOVE 12G FROM SOLUTION PRIOR TO 2 HOURS.**
  4. Remove 12G from container and mix gently before use. Work in well-ventilated area and avoid inhaling fumes. Wear protective gloves if hands will come into contact with activated solution during dilution or application; wear NIOSH/MHSA-approved respirator for chlorine dioxide if working with stock (500 ppm) solution in open container. Remove envelope from container within 24 hours after activation. Do not reuse the 12G. Discard envelope according to instructions below. Before use, verify concentration with *Selective Micro® Chlorine Dioxide Test Strips* to ensure appropriate concentration (see Technical Bulletin for directions if *Test Strips* indicate lower-than-desired concentration).
  5. Activate prior to expiration date stamped on package. Store unused solution (and/or subsequent dilutions) in a dark, oxidation-resistant closed or sealed container. Record activation date and concentration on stick-on label shipped with the product, and affix to storage container. Store activated solution in cool place out of direct sunlight (do not store in refrigerator dedicated to food storage). Test solution and/or subsequent dilutions using colorimetric test strips to ensure accurate ppm concentration before use.
- Note: Verify concentration using *Selective Micro® Test Strips*. For concentrations above 10ppm, use *Selective Micro® Wide Range* test strips; for concentrations of 10ppm or less, use *Selective Micro® Low Range* test strips.

**USE THE FOLLOWING GENERAL DILUTIONS AND TABLE**

General Dilution Instructions: All dilutions begin with a stock solution at a nominal concentration of 500 ppm, except when the product is activated directly to the application concentration (see technical bulletin). Except where otherwise directed, or for other use concentrations (see technical bulletin), use the following dilution instructions to achieve the use concentration indicated:

To Achieve Use Concentration of:	Use Dilution Device or Sprayer With a Dilution Ratio of:
100 ppm	1:5 (one part 500 ppm solution to 4 parts water)
50 ppm	1:10 (one part 500 ppm solution to 9 parts water)
20 ppm	1:25 (one part 500 ppm solution to 24 parts water)
5 ppm	1:100 (one part 500 ppm solution to 99 parts water)
0.25 ppm	1:2,000 (one part 500 ppm solution to 1,999 parts water)

SANITIZER FOR HARD, NON-POROUS, FOOD-CONTACT SURFACES, FOR HARD, NON-POROUS, NON-FOOD-CONTACT SURFACES. DISINFECTANT OR VIRUCIDE\* FOR HARD, NON-POROUS SURFACES, DISINFECTANT FOR CLEAN-IN-PLACE APPLICATIONS FOR POTABLE WATER SYSTEMS, ANTIMICROBIAL AND GENERAL CLEANING APPLICATIONS FOR POTABLE WATER SYSTEMS, ANTIMICROBIAL APPLICATIONS FOR NON-POTABLE WATER SYSTEMS IN HORTICULTURAL SETTINGS, GENERAL DISINFECTANT, SANITIZER, ALGAECIDE AND FUNGICIDE FOR HORTICULTURAL AND GREENHOUSE APPLICATIONS, FRUIT AND VEGETABLE WASH TO EXTEND FRESHNESS AND SHELF-LIFE, ANTIMICROBIAL APPLICATIONS TO CONTROL THE BUILDUP OF MICROBES IN PROCESS WATERS FOR FRUIT AND VEGETABLE RINSE AND ASSOCIATED TANKS, FLUMES, AND LINES, ANTIMICROBIAL TREATMENT FOR POULTRY DRINKING WATER, SANITIZING FINAL RINSE OF PRE-CLEANED OR NEW RETURNABLE OR NON-RETURNABLE CONTAINERS, ANTIMICROBIAL AND GENERAL CLEANING USES FOR NON-POTABLE WATER APPLICATIONS INVOLVING RECIRCULATING WATER SYSTEMS (E.G., COOLING TOWERS, PAPER MILLS, AND DECORATIVE OR ORNAMENTAL FOUNTAINS).

PLEASE REFERENCE MASTER LABEL TECHNICAL BULLETIN FOR DETAILED USE PATTERNS AND DILUTION RATES.

**STORAGE AND DISPOSAL**

DO NOT CONTAMINATE WATER, FOOD OR FEED BY STORAGE AND DISPOSAL. STORE IN COOL, DRY, VENTILATED AREA. STORE BELOW 50° C (122° F). KEEP PRODUCT OUT OF DIRECT SUNLIGHT. STORE SEPARATELY FROM WATER AND ACIDS. IF PACKAGE RUPTURES AND CONTENTS SPILL, DO NOT PERMIT CONTACT OF CONTENTS WITH ORGANIC MATERIALS (FOR EXAMPLE: CLOTHING OR COMBUSTIBLE MATERIALS) OR ACIDS. PESTICIDE WASTES ARE TOXIC. IMPROPER DISPOSAL OF EXCESS DRY PESTICIDE IS A VIOLATION OF FEDERAL LAW. IF THIS PRODUCT CANNOT BE USED ACCORDING TO LABEL INSTRUCTIONS, CONTACT YOUR STATE PESTICIDE OR ENVIRONMENTAL CONTROL AGENCY, OR THE HAZARDOUS WASTE REPRESENTATIVE AT THE NEAREST EPA REGIONAL OFFICE FOR GUIDANCE. NONREFILLABLE CONTAINER. DO NOT REUSE OR REFILL THIS CONTAINER. OFFER FOR RECYCLING, IF AVAILABLE, OR DISPOSE OF SPENT ENVELOPE IN A SANITARY LANDFILL OR BY INCINERATION, OR IF ALLOWED BY STATE AND LOCAL AUTHORITIES, BY BURNING. IF BURNED, STAY OUT OF SMOKE.

**WARRANTY STATEMENT:** The Company warrants the product to be free from defects in material and workmanship. THE COMPANY MAKES NO WARRANTY THAT THE GOODS SHALL BE MERCHANTABILITY. THE COMPANY MAKES NO WARRANTY, EXPRESSED OR IMPLIED, EXCEPT SUCH AS IS EXPRESSLY SET FORTH HEREIN. The Company shall not be liable for any incidental or consequential damages for any breach of warranty. The Company's liability for any breach of warranty shall be limited to the purchase price of the product.

TO OPEN CUT ON DOTTED  
LINE



**DISINFECTANT/SANITIZER/TUBERCULOCIDE/VIRUCIDE\*/FUNGICIDE/ALGAECIDE/SLIMICIDE/DEODORIZER**

When used as directed, this chlorine dioxide-generating product is proven effective as: a **disinfectant** against *Pseudomonas aeruginosa*, *Staphylococcus aureus*, *Salmonella enterica*, methicillin-resistant *S. aureus* (MRSA), vancomycin-resistant *Enterococcus faecalis*, *Mycobacterium bovis* (TB), *Trichophyton mentagrophytes* (athlete's foot), *Listeria monocytogenes*, and *Candida albicans*; a **sanitizer** against *E. coli* (and *E. coli* O157:H7), *S. aureus*, *Salmonella typhimurium* (MDRS), *Klebsiella pneumoniae*, and *Listeria monocytogenes*; a **fungicide** against *Penicillium digitatum*, *Botrytis Sp.*, and *Fusarium solani*; and an **algaecide** (*Phormidium boneri*).

**\*Viruses:** Corona virus, Feline Calicivirus, Hepatitis A virus, Human Immunodeficiency virus type 1 (HIV-1), Poliovirus-1, Rotavirus, Influenza-A virus, Rhinovirus type 37, Canine Parvovirus, Adenovirus type 5, Herpes Simplex virus type 2, Vaccinia virus, and Norovirus (feline calici used as testing surrogate); \*Kills Pandemic 2009 H1N1 Influenza A virus (formerly called swine flu).

See Technical Bulletin (page 5) for ATCC designation numbers of the above-listed organisms.

**KEEP OUT OF REACH OF  
CHILDREN**

**DANGER**

(See back panel for other  
cautions)

Active

Ingredient:

Sodium

Chlorite:.....30.5%

Other

Ingredients:.....69.5%

Total:.....100.0%

*Amount of Chlorine Dioxide generated = 0.05% in 24 liters of water*

Net Weight of contents.....5.41 ounces (153.6 grams)

**FIRST AID**

**If in Eyes:** Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

**If on Skin or Clothing:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

**If Swallowed:** Call poison control center or doctor immediately for treatment advice.

Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person.

**If Inhaled:** Remove victim to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or doctor for treatment advice. Get medical attention.

Have the product container or label with you when calling a poison control center, doctor, or going for treatment. For emergency information concerning this product, call the National Pesticides Information Center (NPIC Web site: [www.npic.orst.edu](http://www.npic.orst.edu)).

**Note to Physician:** Probable mucosal damage may contraindicate the use of gastric lavage.

EPA Registration No. 74986-5

EPA Establishment No. 071441-OH-004 [090569-OH-001]

Manufactured for: Selective Micro Technologies, LLC 6200 Avery Rd. Suite A, Dublin, OH 43016 [www.selectivemicro.com](http://www.selectivemicro.com)

**PRECAUTIONARY STATEMENTS HAZARDS TO  
HUMANS AND DOMESTIC ANIMALS**

**DANGER:** DRY INGREDIENTS: CORROSIVE. CAUSES IRREVERSIBLE EYE DAMAGE AND CAUSES SKIN BURNS. HARMFUL IF SWALLOWED. WEAR PROTECTIVE EYEWEAR (GOGGLES, FACE SHIELD OR SAFETY GLASSES). WEAR PROTECTIVE GLOVES. IF CONTACT WITH DRY INGREDIENTS OCCURS, WASH THOROUGHLY WITH SOAP AND WATER AFTER HANDLING AND BEFORE EATING, DRINKING, CHEWING GUM, USING TOBACCO OR USING THE TOILET. REMOVE CONTAMINATED CLOTHING AND WASH BEFORE REUSE.

**NOTE:** THIS PRODUCT IS DESIGNED TO FULLY COMPARTMENTALIZE DRY INGREDIENTS INSIDE A HYDROPHOBIC ENVELOPE. UNDER NORMAL USE CONDITIONS AND UNLESS SEALED PRODUCT ENVELOPE IS COMPROMISED, CONTACT WITH DRY INGREDIENTS SHOULD NOT OCCUR. HOWEVER, IF SEALED PRODUCT ENVELOPE IS COMPROMISED AND THE POTENTIAL FOR CONTACT WITH DRY INGREDIENTS OCCURS, THE ABOVE PRECAUTIONARY HANDLING STATEMENT SHOULD BE FOLLOWED.

**PHYSICAL OR CHEMICAL HAZARDS**

DRY SODIUM CHLORITE IS INCOMPATIBLE WITH ACIDS, REDUCING AGENTS, COMBUSTIBLE MATERIALS, SULFUR-CONTAINING RUBBER, SOLVENTS AND PAINTS. KEEP ACTIVATED SOLUTION FROM LIGHT AND HEAT. CHLORINE DIOXIDE GAS MAY CONCENTRATE IN OPEN SPACE OF CONTAINER IN WHICH 12G ENVELOPE IS ACTIVATED. ALWAYS DILUTE ACTIVATED PRODUCT IN WELL-VENTILATED AREA. DO NOT REMOVE 12G FROM CONTAINER OF WATER PRIOR TO COMPLETE GENERATION—2 HOURS OR 4 HOURS AFTER IMMERSION IN WATER.

**NOTE: For use in the institutional or commercial applications discussed below and in the accompanying Technical Bulletin.**

When used as directed, on hard, non-porous surfaces (e.g., stainless steel, brass, glass, vinyl, PVC, polypropylene), this product is an effective sanitizer, disinfectant, tuberculocide, virucide\*, fungicide, algacide, general-purpose antimicrobial and cleaner for use in a wide range of applications, including but not limited to: hospitals; medical & veterinary facilities; pharmaceutical production facilities, including equipment (e.g., ultracentrifuges); wineries, breweries, and beverage / bottling plants; laboratories and other clinical settings; potable and non-potable water systems and attendant equipment & tubing; restaurants and food processing plants; and greenhouses/horticultural settings. Heavily soiled surfaces must be pre-cleaned prior to treatment. Apply by mop, sponge, or sprayer, ensuring visible wetness for times specified for these applications, or apply through immersion or clean-in-place application. Wear a NIOSH/MHSA-approved respirator appropriate for chlorine dioxide when using a high-pressurized sprayer and under other circumstances detailed in the Technical Bulletin.

**SPECIAL INSTRUCTIONS FOR CLEANING AND DECONTAMINATING SURFACES AND OBJECTS PREVIOUSLY SOILED WITH BLOOD BODY FLUIDS POTENTIALLY CONTAINING HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (HIV-1) (at 100 ppm/10 min. contact time)**

- Wear protective barriers such as disposable latex gloves, gowns, masks, and eye coverings when handling items soiled with blood or body fluids.
- Blood and other body fluids must be thoroughly cleaned from surfaces and objects before application of Selectroicide 12G.
- Blood, other body fluids, and contaminated cleaning materials should be autoclaved and disposed of according to local regulations for infectious waste disposal.

**DIRECTIONS FOR USE: IT IS A VIOLATION OF FEDERAL LAW TO USE THIS PRODUCT IN A MANNER INCONSISTENT WITH THE LABELING. READ THE ENTIRE LABEL AND USE STRICTLY IN ACCORDANCE WITH PRECAUTIONARY STATEMENTS AND USE.**

1. Open the package, ensuring the 12G envelope inside is not cut. Discard desiccant.
2. To achieve an aqueous solution of 500 ppm chlorine dioxide, immerse (submerge) the 12G envelope in container with 24 liters of water. [To achieve an aqueous solution of 100 ppm chlorine dioxide directly, immerse (submerge) the 12G envelope in container with 120 liters of water.] Close/seal container tightly. Container interior should be dark and resistant to oxidation. See Technical Bulletin for recommendations regarding amount of water, contact times and dilutions for specific applications, and recommended container specifications.
3. **WAIT AT LEAST 2 HOURS BEFORE USE TO ENSURE SOLUTION REACHES STANDARD FULL STRENGTH 500 PPM.**  
MAY REMOVE FROM CONTAINER AFTER 2 HOURS FOR STANDARD LABEL USE.
4. Remove 12G from container and mix gently before use. Work in well-ventilated area and avoid inhaling fumes. Wear protective gloves if hands will come into contact with activated solution during dilution or application; wear NIOSH/MHSA-approved respirator for chlorine dioxide if working with stock (500 ppm) solution in open container. Remove envelope from container within 24 hours after activation. Do not reuse the 12G. Discard envelope according to instructions below. Before use, verify concentration with *Selective Micro® Chlorine Dioxide Test Strips* to ensure appropriate concentration (see Technical Bulletin for directions if *Test Strips* indicate lower-than-desired concentration).
5. Activate prior to expiration date stamped on package. Store unused solution (and/or subsequent dilutions) in a dark, oxidation-resistant closed or sealed container. Record activation date and concentration on stick-on label shipped with the product, and affix to storage container. Store activated solution in cool place out of direct sunlight (do not store in refrigerator dedicated to food storage). Use solution and/or subsequent dilutions within 15 days of activation.

Note: Verify concentration using *Selective Micro® Test Strips*. For concentrations above 10ppm, use *Selective Micro® Wide Range* test strips; for concentrations of 10ppm or less, use *Selective Micro® Low Range* test strips.

**USE THE FOLLOWING GENERAL DILUTIONS AND TABLE**

General Dilution Instructions: All dilutions begin with a stock solution at a nominal concentration of 500 ppm, except when the product is activated directly to the application concentration (see technical bulletin). Except where otherwise directed, or for other use concentrations (see technical bulletin), use the following dilution instructions to achieve the use concentration indicated:

To Achieve Use Concentration of:	Standard Use Dilution Device or Sprayer With a Dilution Ratio of:
100 ppm	1:5 (one part 500 ppm solution to 4 parts water)
50 ppm	1:10 (one part 500 ppm solution to 9 parts water)
20 ppm	1:25 (one part 500 ppm solution to 24 parts water)
5 ppm	1:100 (one part 500 ppm solution to 99 parts water)
0.25 ppm	1:2,000 (one part 500 ppm solution to 1,999 parts water)

SANITIZER FOR HARD, NON-POROUS, FOOD-CONTACT SURFACES, FOR HARD, NON-POROUS, NON-FOOD-CONTACT SURFACES. DISINFECTANT OR VIRUCIDE\* FOR HARD, NON-POROUS SURFACES, DISINFECTANT FOR CLEAN-IN-PLACE APPLICATIONS FOR POTABLE WATER SYSTEMS, ANTIMICROBIAL AND GENERAL CLEANING APPLICATIONS FOR POTABLE WATER SYSTEMS, ANTIMICROBIAL APPLICATIONS FOR NON-POTABLE WATER SYSTEMS IN HORTICULTURAL SETTINGS, GENERAL DISINFECTANT, SANITIZER, ALGACIDE AND FUNGICIDE FOR HORTICULTURAL AND GREENHOUSE APPLICATIONS, FRUIT AND VEGETABLE WASH TO EXTEND FRESHNESS AND SHELF-LIFE, ANTIMICROBIAL APPLICATIONS TO CONTROL THE BUILDUP OF MICROBES IN PROCESS WATERS FOR FRUIT AND VEGETABLE RINSE AND ASSOCIATED TANKS, FLUMES, AND LINES, ANTIMICROBIAL TREATMENT FOR POULTRY DRINKING WATER, SANITIZING FINAL RINSE OF PRE-CLEANED OR NEW RETURNABLE OR NON-RETURNABLE CONTAINERS, ANTIMICROBIAL AND GENERAL CLEANING USES FOR NON-POTABLE WATER APPLICATIONS INVOLVING RECIRCULATING WATER SYSTEMS (E.G., COOLING TOWERS, PAPER MILLS, AND DECORATIVE OR ORNAMENTAL FOUNTAINS).

**PLEASE REFERENCE MASTER LABEL TECHNICAL BULLETIN FOR DETAILED USE PATTERNS AND DILUTION RATES.**

**STORAGE AND DISPOSAL**

DO NOT CONTAMINATE WATER, FOOD OR FEED BY STORAGE AND DISPOSAL. STORE IN COOL, DRY, VENTILATED AREA. STORE BELOW 50° C (122° F). KEEP PRODUCT OUT OF DIRECT SUNLIGHT. STORE SEPARATELY FROM WATER AND ACIDS. IF PACKAGE RUPTURES AND CONTENTS SPILL, DO NOT PERMIT CONTACT OF CONTENTS WITH ORGANIC MATERIALS (FOR EXAMPLE: CLOTHING OR COMBUSTIBLE MATERIALS) OR ACIDS. PESTICIDE WASTES ARE TOXIC. IMPROPER DISPOSAL OF EXCESS DRY PESTICIDE IS A VIOLATION OF FEDERAL LAW. IF THIS PRODUCT CANNOT BE USED ACCORDING TO LABEL INSTRUCTIONS, CONTACT YOUR STATE PESTICIDE OR ENVIRONMENTAL CONTROL AGENCY, OR THE HAZARDOUS WASTE REPRESENTATIVE AT THE NEAREST EPA REGIONAL OFFICE FOR GUIDANCE. NONREFILLABLE CONTAINER. DO NOT REUSE OR REFILL THIS CONTAINER. OFFER FOR RECYCLING, IF AVAILABLE, OR DISPOSE OF SPENT ENVELOPE IN A SANITARY LANDFILL OR BY INCINERATION, OR IF ALLOWED BY STATE AND LOCAL AUTHORITIES, BY BURNING. IF BURNED, STAY OUT OF SMOKE.

**WARRANTY STATEMENT:** The Company warrants the product to be free from defects in material and workmanship. THE COMPANY MAKES NO WARRANTY THAT THE GOODS SHALL BE MERCHANTABLE. THE COMPANY MAKES NO WARRANTY, EXPRESSED OR IMPLIED, EXCEPT SUCH AS IS EXPRESSLY SET FORTH HEREIN. The Company shall not be liable for any incidental or consequential damages for any breach of warranty. The Company's liability for any breach of warranty shall be limited to the purchase price of the product.

TO OPEN CUT ON DOTTED  
LINE

# Selectroicide®

## - 1G -

### DISINFECTANT/SANITIZER/TUBERCULOCIDE/VIRUCIDE\*/FUNGICIDE/ALGAECIDE/SLIMICIDE/DEODORIZER

When used as directed, this chlorine dioxide-generating product is proven effective as: a gram-negative **bactericide** against *carbapenem-resistant Enterobacteriaceae*: *Klebsiella pneumoniae (CRKP)*, a **disinfectant** against *Pseudomonas aeruginosa*, *Staphylococcus aureus*, *Salmonella enterica*, methicillin-resistant *S. aureus (MRSA)*, vancomycin-resistant *Enterococcus faecalis*, *Mycobacterium bovis (TB)*, *Trichophyton mentagrophytes* (athlete's foot), *Listeria monocytogenes*, and *Candida albicans*; a **sanitizer** against *E. coli* (and *E. coli O157:H7*), *S. aureus*, *Salmonella typhimurium (MDRS)*, *Klebsiella pneumonia*, and *Listeria monocytogenes*; a **fungicide** against *Penicillium digitatum*, *Botrytis Sp.*, and *Fusarium solani*; and an **algaecide** (*Phormidium boneri*). \***Viruses**: *Corona virus*, *Feline Calicivirus*, *Hepatitis A virus*, *Human Immunodeficiency virus type 1 (HIV-1)*, *Poliovirus-1*, *Rotavirus*, *Influenza-A virus*, *Rhinovirus type 37*, *Canine Parvovirus*, *Adenovirus type 5*, *Herpes Simplex virus type 2*, *Vaccinia virus*, and *Norovirus (feline calici used as testing surrogate)*; \*Kills Pandemic 2009 H1N1 Influenza A virus (formerly called swine flu).

See Technical Bulletin (page 5) for ATCC designation numbers of the above-listed organisms.

### KEEP OUT OF REACH OF CHILDREN

### DANGER

(See back panel for other  
cautions)

Active Ingredient:	
Sodium Chlorite:.....	30.5%
Other Ingredients:.....	69.5%
Total:.....	100.0%

Amount of Chlorine Dioxide generated = 0.05% in 2 liters of water

Net Weight of contents.....0.44 ounces (12.34 grams)

#### FIRST AID

**If in Eyes:** Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

**If on Skin or Clothing:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

**If Swallowed:** Call poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person.

**If Inhaled:** Remove victim to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or doctor for treatment advice. Get medical attention.

Have the product container or label with you when calling a poison control center, doctor, or going for treatment. For emergency information concerning this product, call the National Pesticides Information Center (NPIC Web site: [www.npic.orst.edu](http://www.npic.orst.edu)).

**Note to Physician:** Probable mucosal damage may contraindicate the use of gastric lavage.

EPA Registration No. 74986-5

EPA Establishment No. 071441-OH-004 [090569-OH-001]

Manufactured for: Selective Micro Technologies, LLC 6200 Avery Rd. Suite A, Dublin, OH 43016 [www.selectivemicro.com](http://www.selectivemicro.com)

### PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS

**DANGER:** DRY INGREDIENTS: CORROSIVE. CAUSES IRREVERSIBLE EYE DAMAGE AND CAUSES SKIN BURNS. HARMFUL IF SWALLOWED. WEAR PROTECTIVE EYEWEAR (GOGGLES, FACE SHIELD OR SAFETY GLASSES). WEAR PROTECTIVE GLOVES. IF CONTACT WITH DRY INGREDIENTS OCCURS, WASH THOROUGHLY WITH SOAP AND WATER AFTER HANDLING AND BEFORE EATING, DRINKING, CHEWING GUM, USING TOBACCO OR USING THE TOILET. REMOVE CONTAMINATED CLOTHING AND WASH BEFORE REUSE.

**NOTE:** THIS PRODUCT IS DESIGNED TO FULLY COMPARTMENTALIZE DRY INGREDIENTS INSIDE A HYDROPHOBIC ENVELOPE. UNDER NORMAL USE CONDITIONS AND UNLESS SEALED PRODUCT ENVELOPE IS COMPROMISED, CONTACT WITH DRY INGREDIENTS SHOULD NOT OCCUR. HOWEVER, IF SEALED PRODUCT ENVELOPE IS COMPROMISED AND THE POTENTIAL FOR CONTACT WITH DRY INGREDIENTS OCCURS, THE ABOVE PRECAUTIONARY HANDLING STATEMENT SHOULD BE FOLLOWED.

**PHYSICAL OR CHEMICAL HAZARDS**

DRY SODIUM CHLORITE IS INCOMPATIBLE WITH ACIDS, REDUCING AGENTS, COMBUSTIBLE MATERIALS, SULFUR-CONTAINING RUBBER, SOLVENTS AND PAINTS. KEEP ACTIVATED SOLUTION FROM LIGHT AND HEAT. CHLORINE DIOXIDE GAS MAY CONCENTRATE IN OPEN SPACE OF CONTAINER IN WHICH 1G ENVELOPE IS ACTIVATED. ALWAYS DILUTE ACTIVATED PRODUCT IN WELL-VENTILATED AREA. DO NOT REMOVE 1G FROM CONTAINER OF WATER PRIOR TO COMPLETE GENERATION—2 HOURS OR 4 HOURS AFTER IMMERSION IN WATER.

**NOTE: For use in the institutional or commercial applications discussed below and in the accompanying Technical Bulletin.**

When used as directed, on hard, non-porous surfaces (e.g., stainless steel, brass, glass, vinyl, PVC, polypropylene), this product is an effective sanitizer, disinfectant, tuberculocide, virucide\*, fungicide, algacide, general-purpose antimicrobial and cleaner for use in a wide range of applications, including but not limited to: hospitals; medical & veterinary facilities; pharmaceutical production facilities, including equipment (e.g., ultracentrifuges); wineries, breweries, and beverage / bottling plants; laboratories and other clinical settings; potable and non-potable water systems and attendant equipment & tubing; restaurants and food processing plants; and greenhouses/horticultural settings. Heavily soiled surfaces must be pre-cleaned prior to treatment. Apply by mop, sponge, or sprayer, ensuring visible wetness for times specified for these applications, or apply through immersion or clean-in-place application. Wear a NIOSH/MHSA-approved respirator appropriate for chlorine dioxide when using a high-pressurized sprayer and under other circumstances detailed in the Technical Bulletin.

**SPECIAL INSTRUCTIONS FOR CLEANING AND DECONTAMINATING SURFACES AND OBJECTS PREVIOUSLY SOILED WITH BLOOD BODY FLUIDS POTENTIALLY CONTAINING HUMAN IMMUNODEFICIENCY VIRUS TYPE 1 (HIV-1) (at 100 ppm/10 min. contact time)**

- Wear protective barriers such as disposable latex gloves, gowns, masks, and eye coverings when handling items soiled with blood or body fluids.
- Blood and other body fluids must be thoroughly cleaned from surfaces and objects before application of Selectroicide 1G.
- Blood, other body fluids, and contaminated cleaning materials should be autoclaved and disposed of according to local regulations for infectious waste disposal.

**DIRECTIONS FOR USE: IT IS A VIOLATION OF FEDERAL LAW TO USE THIS PRODUCT IN A MANNER INCONSISTENT WITH THE LABELING. READ THE ENTIRE LABEL AND USE STRICTLY IN ACCORDANCE WITH PRECAUTIONARY STATEMENTS AND USE.**

1. Open the package, ensuring the 1G envelope inside is not cut. Discard desiccant.
2. To achieve an aqueous solution of 500 ppm chlorine dioxide, immerse (submerge) the 1G envelope in container with 2 liters of water. [To achieve an aqueous solution of 100 ppm chlorine dioxide directly, immerse (submerge) the 1G envelope in container with 10 liters of water.] Close/seal container tightly. Container interior should be dark and resistant to oxidation. See Technical Bulletin for recommendations regarding amount of water, contact times and dilutions for specific applications, and recommended container specifications.
3. **WAIT AT LEAST 2 HOURS BEFORE USE TO ENSURE SOLUTION REACHES STANDARD FULL STRENGTH 500 PPM. WAIT AT LEAST 4 HOURS BEFORE USE TO ENSURE SOLUTION REACHES MAXIMUM STRENGTH 800 PPM.**  
 MAY REMOVE FROM CONTAINER AFTER 2 HOURS FOR STANDARD LABEL USE. MAY REMOVE FROM CONTAINER AFTER 4 HOURS FOR LABEL USE as a bactericide against carbapenem-resistant enterobacteriaceae: klesiella pneumoniae (crkp).
4. Remove 1G from container and mix gently before use. Work in well-ventilated area and avoid inhaling fumes. Wear protective gloves if hands will come into contact with activated solution during dilution or application; wear NIOSH/MHSA-approved respirator for chlorine dioxide if working with stock (500 ppm) solution in open container. Remove envelope from container within 24 hours after activation. Do not reuse the 1G. Discard envelope according to instructions below. Before use, verify concentration with *Selective Micro® Chlorine Dioxide Test Strips* to ensure appropriate concentration (see Technical Bulletin for directions if *Test Strips* indicate lower-than-desired concentration).
5. prior to expiration date stamped on package. Store unused solution (and/or subsequent dilutions) in a dark, oxidation-resistant closed or sealed container. Record activation date and concentration on stick-on label shipped with the product, and affix to storage container. Store activated solution in cool place out of direct sunlight (do not store in refrigerator dedicated to food storage). Use solution and/or subsequent dilutions within 15 days of activation.

Note: Verify concentration using *Selective Micro® Test Strips*. For concentrations above 10ppm, use *Selective Micro® Wide Range* test strips; for concentrations of 10ppm or less, use *Selective Micro® Low Range* test strips.

**USE THE FOLLOWING GENERAL DILUTIONS AND TABLE**

General Dilution Instructions: All dilutions begin with a stock solution at a nominal concentration of 500 ppm, except when the product is activated directly to the application concentration (see technical bulletin). Except where otherwise directed, or for other use concentrations (see technical bulletin), use the following dilution instructions to achieve the use concentration indicated:

To Achieve Use Concentration of:	Standard Use Dilution Device or Sprayer With a Dilution Ratio of:
100 ppm	1:5 (one part 500 ppm solution to 4 parts water)
50 ppm	1:10 (one part 500 ppm solution to 9 parts water)
20 ppm	1:25 (one part 500 ppm solution to 24 parts water)
5 ppm	1:100 (one part 500 ppm solution to 99 parts water)
0.25 ppm	1:2,000 (one part 500 ppm solution to 1,999 parts water)
<b>To Achieve Use Concentration of:</b>	<b>Bactericide against carbapenem-resistant Enterobacteriaceae: Klebsiella pneumonia (CRKP)</b>
800 ppm	Generate (1) 1G in 1.5 liters of water for 4 hours

SANITIZER FOR HARD, NON-POROUS, FOOD-CONTACT SURFACES, FOR HARD, NON-POROUS, NON-FOOD-CONTACT SURFACES. DISINFECTANT OR VIRUCIDE\* FOR HARD, NON-POROUS SURFACES, DISINFECTANT FOR CLEAN-IN-PLACE APPLICATIONS FOR POTABLE WATER SYSTEMS, ANTIMICROBIAL AND GENERAL CLEANING APPLICATIONS FOR POTABLE WATER SYSTEMS, ANTIMICROBIAL APPLICATIONS FOR NON-POTABLE WATER SYSTEMS IN HORTICULTURAL SETTINGS, GENERAL DISINFECTANT, SANITIZER, ALGACIDE AND FUNGICIDE FOR HORTICULTURAL AND GREENHOUSE APPLICATIONS, FRUIT AND VEGETABLE WASH TO EXTEND FRESHNESS AND SHELF-LIFE, ANTIMICROBIAL APPLICATIONS TO CONTROL THE BUILDUP OF MICROBES IN PROCESS WATERS FOR FRUIT AND VEGETABLE RINSE AND ASSOCIATED TANKS, FLUMES, AND LINES, ANTIMICROBIAL TREATMENT FOR POULTRY DRINKING WATER, SANITIZING FINAL RINSE OF PRE-CLEANED OR NEW RETURNABLE OR NON-RETURNABLE CONTAINERS, ANTIMICROBIAL AND GENERAL CLEANING USES FOR NON-POTABLE WATER APPLICATIONS INVOLVING RECIRCULATING WATER SYSTEMS (E.G., COOLING TOWERS, PAPER MILLS, AND DECORATIVE OR ORNAMENTAL FOUNTAINS).

**PLEASE REFERENCE MASTER LABEL TECHNICAL BULLETIN FOR DETAILED USE PATTERNS AND DILUTION RATES.**

### **STORAGE AND DISPOSAL**

DO NOT CONTAMINATE WATER, FOOD OR FEED BY STORAGE AND DISPOSAL. STORE IN COOL, DRY, VENTILATED AREA. STORE BELOW 50° C (122° F). KEEP PRODUCT OUT OF DIRECT SUNLIGHT. STORE SEPARATELY FROM WATER AND ACIDS. IF PACKAGE RUPTURES AND CONTENTS SPILL, DO NOT PERMIT CONTACT OF CONTENTS WITH ORGANIC MATERIALS (FOR EXAMPLE: CLOTHING OR COMBUSTIBLE MATERIALS) OR ACIDS. PESTICIDE WASTES ARE TOXIC. IMPROPER DISPOSAL OF EXCESS DRY PESTICIDE IS A VIOLATION OF FEDERAL LAW. IF THIS PRODUCT CANNOT BE USED ACCORDING TO LABEL INSTRUCTIONS, CONTACT YOUR STATE PESTICIDE OR ENVIRONMENTAL CONTROL AGENCY, OR THE HAZARDOUS WASTE REPRESENTATIVE AT THE NEAREST EPA REGIONAL OFFICE FOR GUIDANCE. NONREFILLABLE CONTAINER. DO NOT REUSE OR REFILL THIS CONTAINER. OFFER FOR RECYCLING, IF AVAILABLE, OR DISPOSE OF SPENT ENVELOPE IN A SANITARY LANDFILL OR BY INCINERATION, OR IF ALLOWED BY STATE AND LOCAL AUTHORITIES, BY BURNING. IF BURNED, STAY OUT OF SMOKE.

**WARRANTY STATEMENT:** The Company warrants the product to be free from defects in material and workmanship. THE COMPANY MAKES NO WARRANTY THAT THE GOODS SHALL BE MERCHANTABLE. THE COMPANY MAKES NO WARRANTY, EXPRESSED OR IMPLIED, EXCEPT SUCH AS IS EXPRESSLY SET FORTH HEREIN. The Company shall not be liable for any incidental or consequential damages for any breach of warranty. The Company's liability for any breach of warranty shall be limited to the purchase price of the product

Volume 1- Selectroicide 5G (EPA Reg. No. 74986-5) Label Amendment

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# Selectro *Fresh*™ 12G FOOD PROCESSING

## SANITIZER/BACTERICIDE/FUNGICIDE/DISINFECTANT/VIRUCIDE/DEODORIZER

When used as directed, this chlorine dioxide-generating product is proven effective as: a **sanitizer** against *E. coli* (and *E. coli* O157:H7), *S. aureus*, *Salmonella typhimurium* (MDRS), *Klebsiella pneumoniae*, and *Listeria monocytogenes*; a **bactericide** against *Erwinia chrysanthemi*, a **fungicide** against *Penicillium digitatum*, *Botrytis* Sp, and *Fusarium solani*, a **bactericide** against *Salmonella enterica* (choleraesuis), a **virucide** against Norovirus (teine calici used as testing surrogate). See Technical Bulletin (page 4) for ATCC designation numbers of the above-listed organisms.



### PRECAUTIONARY STATEMENTS

#### HAZARDS TO HUMANS AND DOMESTIC ANIMALS

**DANGER: DRY INGREDIENTS: CORROSIVE. CAUSES IRREVERSIBLE EYE DAMAGE (GOOGLES FACE SHIELD OR SAFETY GLASSES). WEAR PROTECTIVE GLOVES. IF CONTACT WITH DRY INGREDIENTS OCCURS, WASH THOROUGHLY WITH SOAP AND WATER AFTER HANDLING AND BEFORE EATING, DRINKING, CHEWING GUM, USING TOBACCO OR USING THE TOILET. REMOVE CONTAMINATED CLOTHING AND WASH BEFORE REUSE.**

**NOTE: THIS PRODUCT IS DESIGNED TO FULLY COMPARTMENTALIZE DRY INGREDIENTS INSIDE A HYDROPHOBIC ENVELOPE. UNDER NORMAL USE CONDITIONS AND UNLESS SEALED PRODUCT ENVELOPE IS COMPROMISED, CONTACT WITH DRY INGREDIENTS SHOULD NOT OCCUR. HOWEVER, IF SEALED PRODUCT ENVELOPE IS COMPROMISED AND THE POTENTIAL FOR CONTACT WITH DRY INGREDIENTS OCCURS, THE ABOVE PRECAUTIONARY RECOMMENDATIONS SHOULD BE FOLLOWED WHEN HANDLING.**

#### PHYSICAL OR CHEMICAL HAZARDS

DRY SODIUM CHLORITE IS INCOMPATIBLE WITH ACIDS, REDUCING AGENTS, COMBUSTIBLE MATERIALS, SULFUR-CONTAINING RUBBER, SOLVENTS AND PAINTS. KEEP ACTIVATED SOLUTION FROM LIGHT AND HEAT. CHLORINE DIOXIDE GAS MAY CONCENTRATE IN OPEN SPACE OF CONTAINER IN WHICH 12G ENVELOPE IS ACTIVATED. ALWAYS DILUTE ACTIVATED PRODUCT IN WELL-VENTILATED AREA. DO NOT REMOVE 12G FROM CONTAINER OF WATER PRIOR TO COMPLETE GENERATION—2 HOURS AFTER IMMERSION IN WATER.

**Note:** for use in institutional and commercial applications discussed below and in the accompanying technical bulletin. Verify concentration using Selective Micro® Test Strips. For concentrations above 10ppm, use Selective Micro® Wide Range test strips; for concentrations of 10ppm or less, use Selective Micro® Low Range test strips.

#### STORAGE AND DISPOSAL

DO NOT CONTAMINATE WATER, FOOD OR FEED BY STORAGE AND DISPOSAL. STORE IN COOL, DRY, VENTILATED AREA. STORE BELOW 50° C (122° F). KEEP PRODUCT OUT OF DIRECT SUNLIGHT. STORE SEPARATELY FROM WATER AND ACIDS. IF PACKAGE RUPTURES AND CONTENTS SPILL, DO NOT PERMIT CONTACT OF CONTENTS WITH ORGANIC MATERIALS (FOR EXAMPLE: CLOTHING OR COMBUSTIBLE MATERIALS) OR ACIDS. PESTICIDE WASTES ARE TOXIC. IMPROPER DISPOSAL OF EXCESS DRY PESTICIDE IS A VIOLATION OF FEDERAL LAW. IF THIS PRODUCT CANNOT BE USED ACCORDING TO LABEL INSTRUCTIONS, CONTACT YOUR STATE PESTICIDE OR ENVIRONMENTAL CONTROL AGENCY, OR THE HAZARDOUS WASTE REPRESENTATIVE AT THE NEAREST EPA REGIONAL OFFICE FOR GUIDANCE. NONREFILLABLE CONTAINER. DO NOT REUSE OR REFILL THIS CONTAINER. OFFER FOR RECYCLING, IF AVAILABLE, OR DISPOSE OF SPENT ENVELOPE IN A SANITARY LANDFILL OR BY INCINERATION, OR IF ALLOWED BY STATE AND LOCAL AUTHORITIES, BY BURNING. IF BURNED, STAY OUT OF SMOKE.

**WARRANTY STATEMENT** The Company warrants the product to be free from defects in material and workmanship. THE COMPANY MAKES NO WARRANTY THAT THE GOODS SHALL BE MERCHANTABLE. THE COMPANY MAKES NO WARRANTY, EXPRESSED OR IMPLIED, EXCEPT SUCH AS IS EXPRESSLY SET FORTH HEREIN. The Company shall not be liable for any incidental or consequential damages for any breach of warranty. The Company's liability for any breach of warranty shall be limited to the purchase price of the product.

### FIRST AID

**If in Eyes:** Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

**If on Skin or Clothing:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

**If Swallowed:** Call poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person.

**If Inhaled:** Remove victim to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call a poison control center or doctor for treatment advice. Get medical attention.

Have the product container or label with you when calling a poison control center, doctor, or going for treatment.

**Note to Physician:** Probable mucosal damage may contraindicate the use of gastric lavage.

EPA Registration No. 74986-5

EPA Establishment No. 090569-OH-001

## KEEP OUT OF REACH OF CHILDREN DANGER

#### Active Ingredient:

Sodium Chlorite:.....30.5%  
Other Ingredients:..... 69.5%  
Total:.....100.0%

Amount of Chlorine Dioxide generated = 0.05% in 24 liters of water  
Net Weight of contents:..... 5.42 ounces (153.6 grams)

**Volume 1- Selectroicide 5G (EPA Reg. No. 74986-5) Label Amendment**



**DIRECTIONS FOR USE:**

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IT IS A VIOLATION OF FEDERAL LAW TO USE THIS PRODUCT IN A MANNER INCONSISTENT WITH THE LABELING. READ THE ENTIRE LABEL AND USE STRICTLY IN ACCORDANCE WITH PRECAUTIONARY STATEMENTS AND USE DIRECTIONS.

1. Open the package, ensuring the 12G envelope inside is not out. Discard desiccant.
2. To achieve an aqueous solution of 500 ppm chlorine dioxide, immerse (submerge) the 12G envelope in container with 24 liters of water. [To achieve an aqueous solution of 100 ppm chlorine dioxide directly, immerse (submerge) the 12G envelope in container with 120 liters of water.] Close/seal container tightly. Container interior should be dark and resistant to oxidation. See Technical Bulletin for recommendations regarding amount of water, contact times and dilutions for specific applications, and recommended container specifications.
3. **WAIT AT LEAST 2 HOURS BEFORE USE TO ENSURE SOLUTION REACHES FULL STRENGTH.**  
DO NOT REMOVE 12G FROM CONTAINER OF WATER PRIOR TO 2 HOURS.
4. Remove 12G from container and mix gently before use. Work in well-ventilated area and avoid inhaling fumes. Wear protective gloves if hands will come into contact with activated solution during dilution or application; wear NIOSH/MHSA-approved respirator for chlorine dioxide if working with stock (500 ppm) solution in open container. Remove envelope from container within 24 hours after activation. Do not reuse the 12G. Discard envelope according to instructions below. Before use, verify concentration with Selective Micro® Chlorine Dioxide Test Strips to ensure appropriate concentration (see Technical Bulletin for directions if Test Strips indicate lower-than-desired concentration).
5. Activate prior to expiration date stamped on package. Store unused solution (and/or subsequent dilutions) in a dark, oxidation-resistant closed or sealed container. Record activation date and concentration on stick-on label shipped with the product, and affix to storage container. Store activated solution in cool place out of direct sunlight (do not store in refrigerator dedicated to food storage). Test solution and/or subsequent dilutions using colorimetric test strips to ensure accurate ppm concentration before use.

When used as directed, on hard, non-porous surfaces (e.g., stainless steel, brass, glass, vinyl, PVC, polypropylene), this product is an effective sanitizer, virucide, fungicide, algacide, general-purpose antimicrobial and cleaner for use in a wide range of applications. Heavily soiled surfaces must be pre-cleaned prior to treatment. Apply by mop, sponge, or sprayer, ensuring visible wetness for times specified for these applications, or apply through immersion or clean-in-place application. Wear a NIOSH/MHSA-approved respirator appropriate for chlorine dioxide when using a high-pressurized sprayer and under other circumstances detailed in the Technical Bulletin.



**GENERAL DILUTION INSTRUCTIONS:**

All dilutions begin with a stock solution at a nominal concentration of 500 ppm, except when the product is activated directly to the application concentration (see technical bulletin). Except where otherwise directed, or for other use concentrations (see technical bulletin), use the following dilution instructions to achieve the use concentration indicated:

To Achieve Use Concentration of:	Use Dilution Device or Sprayer With a Dilution Ratio of:
100 ppm	1:5 (one part 500 ppm solution to 4 parts water)
50 ppm	1:10 (one part 500 ppm solution to 9 parts water)
20 ppm	1:25 (one part 500 ppm solution to 24 parts water)
5 ppm	1:100 (one part 500 ppm solution to 99 parts water)
0.25 ppm	1:2,000 (one part 500 ppm solution to 1,999 parts water)

**SANITIZER FOR HARD, NON-POROUS, FOOD-CONTACT SURFACES.** Effective food contact surface sanitizer at 5 ppm against *E. coli* O157:H7, *Salmonella typhimurium* (MDRS), and *Staphylococcus aureus* with an exposure time of 1 minute. Product may be used on previously cleaned food preparation surfaces; fountain drink and beverage dispensers; glassware, plates and eating utensils; food processing equipment, including beer processing equipment and lines, and food conveyor belts. Dilute to 5 ppm as table above specifies. See Technical Bulletin for alternative dilution instructions and application specifics.

**SANITIZER FOR HARD, NON-POROUS, NON-FOOD-CONTACT SURFACES.**

Effective non-food contact surface sanitizer at 20 ppm against *Staphylococcus aureus*, *Klebsiella pneumoniae* and *Listeria monocytogenes* with an exposure time of 5 minutes. Product may be used on non-food contact surfaces, including floors, walls, furnishings, and equipment. Dilute to 20 ppm as table above specifies. See Technical Bulletin for alternative dilution instructions and application specifics.

**FRUIT AND VEGETABLE WASH TO EXTEND FRESHNESS AND SHELF-LIFE.**

This product may be used at 5 ppm for 1 minute to reduce spoilage microorganisms on raw agricultural commodities (RACs) in food processing facilities. Spray or dip RACs, and follow with a potable water rinse or by canning, blanching, or cooking. Dilute to 5 ppm as table above specifies. See Technical Bulletin for detailed directions and other dilution and application specifics.

**GENERAL DISINFECTANT, SANITIZER, ALGAECIDE AND FUNGICIDE FOR HORTICULTURAL AND GREENHOUSE APPLICATIONS:**

For horticultural applications, this product may be used to disinfect (100 ppm/10 minutes or 50 ppm/20 minutes) and sanitize (20 ppm/5 minutes) hard, non-porous surfaces; to treat, control, and prevent fungi (5 ppm/1 hour) (*Penicillium digitatum*, *Botrytis* Sp, *Fusarium solani* & *oxysporum* f. sp. *Basilicum* (Fob), and *Pythium irregulare* & *aphanidermatum*), bacteria (*Erwinia chrysanthemi*), algae (*Phormidium boneni*), attendant slimes, rusts, leaf spot and mildews; and to remove slimes (50 ppm/12 hours-overnight) & inhibit reemergence (0.25 ppm/continuous treatment) in irrigation and other non-potable water systems. Concentrations and contact times are application-specific; dilute to use concentrations as table above specifies. See Technical Bulletin for detailed directions and other dilution and application specifics.

**DISINFECTANT OR VIRUCIDE\* FOR HARD, NON-POROUS SURFACES:**

Product may be used at 100 ppm with an exposure time of 10 minutes to disinfect hard surfaces in medical facilities or veterinary clinics that may be contaminated with Feline Calicivirus. This product may be used as a disinfectant or virucide on general environmental surfaces. Dilute to 100 ppm as table above specifies. See Technical Bulletin for detailed directions and other dilution and application specifics.

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# Selectroicide® G Series

1G 5G 12G 12G MultiPack-15



## Technical Bulletin

### Disinfectant/Sanitizer/Tuberculocide/Virucide\* Fungicide/Algaecide/Slimicide/Deodorizer

EPA Registration No. 74986-5

EPA Establishment No. 071441-OH-004 [090569-OH-001]

To activate: See "Directions for Use" on package label

**Use the following number of envelopes to prepare a 500 or 800 ppm solution of chlorine dioxide in the indicated volume of water inside a closed container; for activation protocols to reach 800ppm, product should be immersed into water for a minimum of four hours:**

For this concentration of chlorine dioxide	In this Volume of Water:		Immerse this number of Selectroicide® 1G envelopes for at least two (2) hours; [at least four (4) hours for 800ppm generation]	Immerse this number of Selectroicide® 5G envelopes for at least ten (10) hours	Immerse this number of Selectroicide® 12G [SelectroFresh 12G Food Processing] envelopes for at least ten (10) hours [two (2) hours]	Immerse this number of Selectroicide® 12G MultiPack-15s for at least ten (10) hours
	Gallons	Liters				
500 ppm	2.5	10	5	1		
500 ppm	5	20	10	2		
500 ppm	6	24	12		1	
500 ppm	7.5	30	15			
500 ppm	10	40	20	4		
500 ppm	12	48			2	
500 ppm	15	60		6		
500 ppm	18	72			3	

500 ppm	23	90			4	
500 ppm	30	120			5	
500 ppm	50 <sup>1</sup>	190			8	
500 ppm	95 <sup>2</sup>	360				1
500 ppm	190	720				2
800 ppm	-	1.5	1			

Note: Verify concentration using Selective Micro® Test Strips. For concentrations above 10ppm, use Selective Micro® Wide Range test strips; for concentrations of 10ppm or less, use Selective Micro® Low Range test strips.

*1 For use especially in a 55-gallon drum*

*2 For use especially in a 100-gallon container*

**Remove envelope after 10 hour [after 2 hours] [after 4 hours] activation vessel and within 48 hours [within 24 hours]**

Alternative dilution concentrations to targeted end-use concentrations are listed below.

***Alternatively, use the following volumes of water to achieve the desired concentrations of chlorine dioxide inside a closed container:***

**NOTE: Activating the *Selectrocide*® 12G MultiPack-15 product directly to end-use concentrations (100 ppm or less) is generally impractical due to container volume limitations (e.g., diluting directly to 100 ppm would require a container of nearly 500-gallon capacity). Unless adequate large-capacity containers for mixing/storing are available, the 12G MultiPack-15 should be activated to 500 ppm as specified on the previous page and diluted subsequently to the required application concentration. Contact Selective Micro Technologies for further details.**

For this concentration of chlorine dioxide	Immerse the <i>Selectrocide</i> ® 1G in this amount of clean, potable water for at least two (2) hours; remove after.	Immerse the <i>Selectrocide</i> ® 5G in this amount of clean, potable water for at least ten (10) hours; remove after.	Immerse the <i>Selectrocide</i> ® 12G [SelectroFresh 12G Food Processing] in this amount of clean, potable water for at least ten (10) hours [at least two (2) hours]; remove after.
100 ppm	10 liters	50 liters	120 liters
100 ppm	2.6 gallons	13.0 gallons	31 gallons
50 ppm	20 liters	100 liters	240 liters
50 ppm	5.2 gallons	26.0 gallons	63 gallons
20 ppm	50 liters	250 liters	600 liters
20 ppm	13.1 gallons	65.5 gallons	158 gallons
5 ppm	200 liters	1,000 liters	2,400 liters
5 ppm	52 gallons	260 gallons	630 gallons
0.25 ppm	4,000 liters	20,000 liters	48,000 liters
0.25 ppm	1,055 gallons	5,275 gallons	12,675 gallons

## Bracketed [] Text Optional

5 ppm	200 liters	1,000 liters	2,400 liters
5 ppm	52 gallons	260 gallons	630 gallons
0.25 ppm	4,000 liters	20,000 liters	48,000 liters
0.25 ppm	1,055 gallons	5,275 gallons	12,675 gallons

Note: Verify concentration using Selective Micro® Test Strips. For concentrations above 10ppm, use Selective Micro® Wide Range test strips; for concentrations of 10ppm or less, use Selective Micro® Low Range test strips.

**Do not remove 5G envelope from container of water prior to 10 hours.**

**[1G, 12G and 12G MultiPack-15—10 hours] [SelectroFresh 12G Food Processing – 24 hours]**

**Discard the spent 5G [1G, 12G] envelope or 12G MultiPack-15 [SelectroFresh 12G Food Processing] and mesh**

**Bag (follow disposal instructions on package label), and mix solution gently prior to use.**

**Do not reuse 5G [1G, 12G] [SelectroFresh 12G Food Processing] envelope or 12G MultiPack-15.**

**Check concentration of solution using *Selective Micro® Chlorine Dioxide Test Strips*.**

**(See box on following page for instructions if check indicates concentration lower than desired) Record activation date and concentration on stick-on label and affix to storage container. Use solution within 15 days of activation.**

**Storage: Store unused solution according to “Directions for Use” on package label.**

## Bracketed [] Text Optional

### **DURING USE (DILUTING, APPLYING, OR WORKING WITH ACTIVATED PRODUCT):**

1. Always work in well-ventilated area and avoid inhaling fumes of activated solution.
2. Wear protective gloves if hands will come in contact with activated solution.
3. Respiratory protection is not required under the limited exposure conditions of most normal use patterns. However, wear a NIOSH/MSHA-approved respirator under the following conditions:
  - a. when applying activated solution with a high-pressure sprayer
  - b. when working with the activated solution for an extended period of time in a closed facility or in a poorly-ventilated area
  - c. when normal workshift duties entail uninterrupted periods of applying the activated solution with mop, sponge, or sprayer
  - d. when opening vessel containing stock activated solution (at 500 ppm) generated using G-series products
  - e. if OSHA inhalation exposure limits are reached or exceeded (see MSDS).
4. Do not use product in a manner inconsistent with the label.

### **IF TEST STRIPS INDICATE CONCENTRATION (PPM) LOWER THAN DESIRED:**

1. Check expiration date on *Test Strips* container. If expired, then recheck using fresh *Test Strip* from a container that has not reached its expiration date.
2. If the original container has not expired OR if the recheck indicates a lower-than-desired concentration, THEN DO ONE OF THE FOLLOWING:
  - 2a. If the application solution was prepared directly to the end-concentration (not diluted from a higher concentration), discard the solution and activate a fresh (unused) *Selectroicide*<sup>®</sup>5G [1G, 12G][*SelectroFresh* 12G Food Processing]. Recheck concentration after waiting the prescribed time to activation.

OR
  - 2b. If the application solution was prepared by diluting a solution of higher concentration, add small amounts of the higher-concentration solution to the application solution—about 10% of the volume of the application solution at a time—until the *Selective Micro*<sup>®</sup>*Chlorine Dioxide Test Strip* indicates the desired concentration. Stir or mix the solution gently after each addition. Use a fresh (unused) *Test Strip* for each test.

### **RECOMMENDED SPECIFICATIONS FOR CONTAINERS USED WITH SELECTIVE MICRO PRODUCTS**

#### **FOR USE IN GENERATING OR STORING ACTIVATED SOLUTIONS**

- The container should be—or be comparable to—a UN-approved, liquid-resealable containment incorporating a gasket-sealing surface and locking mechanism.
- Construction should be of dark or opaque/UV-blocking (preferred) oxidation-resistant plastic or glass. Some materials recommended include:
  - High Density Polyethylene (HDPE)
  - Polypropylene (PP)
  - Polyethylene Terephthalate (PET)(PETE)
  - Polyvinyl Chloride (PVC)
  - Polycarbonate (PC)
  - Glass (UV-blocking preferred)
  - Gasket materials; silicone, viton or EPDM

Users without containers comparable to the above may contact Selective Micro Technologies for recommendations or to purchase containers for their applications.

## Bracketed [] Text Optional

### ATCC (OR OTHER) DESIGNATIONS FOR PATHOGENIC ORGANISMS LISTED ON THE LABELS OF REGISTERED SELECTROCIDAL PRODUCTS

—Always Consult Label to Verify Concentrations and Contact Times—

#### Bacteria (disinfection claims) 100 ppm/10-minute contact time

<i>Pseudomonas aeruginosa</i>	ATCC 15442
[ <i>Staphylococcus aureus</i> ]	ATCC 6538]
[ <i>Salmonella enterica (choleraesuis)</i> ]	ATCC 10708]
Methicillin-resistant <i>Staphylococcus aureus</i> (MRSA)	ATCC 33592
Vancomycin-resistant <i>Enterococcus faecalis</i> (VRE)	ATCC 51299
<i>Candida albicans</i>	ATCC 10231
<i>Trichophyton mentagrophytes</i>	ATCC 9533
[ <i>Listeria monocytogenes</i> ]	ATCC 19111]
[ <i>Klebsiella pneumonia</i> ]	ATCC 4352]
<i>Mycobacterium bovis</i> (TB)	BCG (Organon Teknika Corporation)

#### Bacteria (disinfection claims) for 50 ppm/20-minute contact time for clean-in-place applications

<i>Pseudomonas aeruginosa</i>	ATCC 15442
[ <i>Staphylococcus aureus</i> ]	ATCC 6538]
[ <i>Salmonella enterica (choleraesuis)</i> ]	ATCC 10708]
Methicillin-resistant <i>Staphylococcus aureus</i> (MRSA)	ATCC 33592
Vancomycin-resistant <i>Enterococcus faecalis</i> (VRE)	ATCC 51299
<i>Candida albicans</i>	ATCC 10231

#### \*Viruses (virucidal claims at 100 ppm/10-minute contact time)

<i>Coronavirus</i>	ATCC VR-740, Strain 229E
[ <i>Feline Calicivirus</i> ]	ATCC VR-782, Strain F-9]
<i>Hepatitis A virus</i>	Strain HM-175
<i>Human Immunodeficiency Virus type 1 (HIV-1)</i>	Strain HTLV-III <sub>B</sub>
<i>Poliovirus-1</i>	ATCC VR-1000, Strain Brunhilde
<i>Rotavirus</i>	Strain WA
<i>Influenza-A virus</i>	ATCC VR-544, Strain Hong Kong
<i>Rhinovirus type 37</i>	ATCC VR-1147, Strain 151-1
<i>Canine Parvovirus</i>	ATCC VR-2017, Strain Cornell
<i>Adenovirus type 5</i>	ATCC VR-5, Strain Adenoid 75
<i>Herpes Simplex virus type 2</i>	ATCC VR-734, Strain G <i>Vaccinia</i>
<i>virus</i>	ATCC VR-119, Strain WR
[ <i>Norovirus (feline calicivirus surrogate)</i> ]	ATCC VR-782, Strain F-9]
Pandemic 2009 H1N1 Influenza A virus	Reference <i>Influenza-A virus</i> (above)

#### Bacteria (sanitizer claim for hard, non-porous food contact surfaces) 5 ppm/1-minute contact time

[ <i>Staphylococcus aureus</i> ]	ATCC 6538]
[ <i>Escherichia Coli</i> ]	ATCC 11229]
[ <i>Escherichia coli O157:H7</i> ]	ATCC 43895]
[ <i>Salmonella typhimurium</i> (MDRS)]	CI 01005 (University of Maryland)]

#### Bacteria (sanitizer claim for hard, non-porous non-food contact surfaces) 20 ppm/5-minute contact time

[ <i>Staphylococcus aureus</i> ]	ATCC 6538]
[ <i>Klebsiella pneumonia</i> ]	ATCC 4352]
[ <i>Listeria monocytogenes</i> ]	ATCC 19111]

#### Bacteria (disinfection claims) 800 ppm/10-minute contact time

\*\*Carbapenem-resistant *Enterobacteriaceae: Klebsiella pneumoniae* (CRKP) ATCC 17054

\*\*Claim only for EPA Product Reg. No. 74986-5

## GENERAL USES

### A. SANITIZER

#### FOR HARD, NON-POROUS FOOD CONTACT SURFACES

**As a sanitizer for stainless steel and other hard, non-porous food contact surfaces such as tanks, transfer lines and other food processing equipment in food processing plants such as poultry, fish & meat and in restaurants, dairies, beverage and bottling plants, breweries, wineries and commissaries:**

1. Activate *Selectrocid*<sup>®</sup>5G [1G, 12G, 12G MultiPack-15] [SelectroFresh 12G Food Processing] according to "Directions for Use" on package label.
2. Remove all gross food particles and soil prior to sanitizing using a pre-flush, pre-scrape or pre-soak treatment.
3. Clean tank, line or surface thoroughly using a suitable detergent and rinse with clean, potable water before sanitizing.
4. Prepare a 5 ppm solution of activated *Selectrocid*<sup>®</sup>5G [1G, 12G, ] [SelectroFresh 12G Food Processing] OR prepare a 500 ppm solution [1G, 5G, 12G, or 12G MultiPack-15] [SelectroFresh 12G Food Processing] and use a 1:100 dilution device (one part 500 ppm solution to 99 parts water).
5. To apply: spray, mop, sponge or swab surfaces or fill, flush, immerse or circulate in tanks, lines, and equipment, ensuring the target surfaces remain visibly wet for at least one minute. When applying these solutions using a high-pressure sprayer, wear a NIOSH/MSHA-approved respirator appropriate for chlorine dioxide.
6. After sanitizing, allow surfaces or equipment to air dry. Do not reuse solution. Do not rinse sanitized surface.
7. Dispose of package and spent envelope according to instructions on package label.

#### FOR HARD, NON-POROUS, NON-FOOD CONTACT SURFACES

**As a sanitizer for non-porous, non-food contact surfaces and equipment such as sealed concrete and sealed, finished wood, backsplashes, bench and counter tops, stainless steel or hard-surface equipment, glazed tile floors, walls, and ceilings:**

1. Activate *Selectrocid*<sup>®</sup>5G [1G, 12G, 12G MultiPack-15] [SelectroFresh 12G Food Processing] according to "Directions for Use" on package label.
2. Clean all surfaces thoroughly with a suitable detergent and rinse with water prior to sanitizing.
3. Prepare a 20 ppm solution of activated *Selectrocid*<sup>®</sup>5G [1G, 12G] OR prepare a 500 ppm solution [1G, 5G, 12G, or 12G MultiPack-15] [SelectroFresh 12G Food Processing] and use a 1:25 dilution device (one part 500 ppm solution to 24 parts water).
4. To apply: spray, mop, sponge or swab onto the surfaces to be sanitized, ensuring the target surfaces remain visibly wet for at least five minutes. When applying these solutions using a high-pressure sprayer, wear a NIOSH/MSHA-approved respirator appropriate for chlorine dioxide.
5. After sanitizing, allow surfaces or equipment to air dry. Do not reuse solution. Do not rinse sanitized surfaces.
6. Dispose of package and spent envelope according to instructions on package label.

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## B. DISINFECTANT

**To disinfect stainless steel and other hard, non-porous surfaces such as tanks, transfer lines and other food processing equipment in food processing plants such as poultry, fish & meat and in restaurants, dairies, beverage and bottling plants, breweries, wineries and commissaries and to disinfect walls, floors and ceilings:**

1. Activate *Selectroicide*<sup>®</sup>5G [1G, 12G, 12G MultiPack-15] [SelectroFresh 12G Food Processing] according to "Directions for Use" on package label.
2. Remove all gross food particles and soil prior to disinfecting using a pre-flush, pre-scrape or pre-soak treatment.
3. Clean tank, line or surface thoroughly using a suitable detergent and rinse with clean, potable water before disinfecting.
4. Prepare a 100 ppm solution of activated *Selectroicide*<sup>®</sup>5G [1G, 12G] OR prepare a 500 ppm solution [1G, 5G, 12G, or 12G MultiPack-15] [SelectroFresh 12G Food Processing] and use a 1:5 dilution device (one part 500 ppm solution to four parts water).
5. To apply: spray, mop, sponge or swab surfaces or fill, flush, immerse or circulate in tanks, lines, and equipment, ensuring the target surfaces remain visibly wet for at least ten (10) minutes. When applying these solutions using a high-pressure sprayer, wear a NIOSH/MSHA-approved respirator appropriate for chlorine dioxide.
6. After disinfecting, allow surfaces or equipment to air dry. Do not reuse solution. Do not rinse disinfected surfaces.
7. Dispose of package and spent envelope according to instructions on package label.

## C. Gram Negative Bactericide Against carbapenem-resistant *Enterobacteriaceae*: *Klebsiella pneumoniae* (CRKP)

**To disinfect stainless steel and other hard, no-porous surfaces such as bedrails, door handles and to disinfect walls, floors and ceilings**

1. Activate *Selectroicide*<sup>®</sup>1G according to "Directions for Use" on pouch label.
2. Remove all organic particles and soil prior to disinfecting
3. Prepare an 800 ppm solution in accordance with instructions above for the activated *Selectroicide*<sup>®</sup>1G.
4. To apply: spray surfaces until visibly wet, ensuring the target surfaces remain visibly wet for at least ten (10) minutes. When applying these solutions using a high-pressure sprayer, wear a NIOSH/MSHA-approved respirator appropriate for chlorine dioxide.
5. After disinfecting allow surfaces or equipment to air dry or wipe with a clean dry cloth or wipe. Do not reuse solution. Do not rinse disinfected surfaces.
6. Dispose of pouch according to instructions on pouch label.

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## DISINFECTANT USES IN MEDICAL AND DENTAL OFFICES, LABORATORIES, HOSPITALS, CLINICS, MORGUES AND INSTITUTIONS

**NOTE:** This product is not to be used as a terminal sterilant/high-level disinfectant on any surface or instrument that (1) is introduced directly into the human body, either into or in contact with the blood stream or normally sterile areas of the body or (2) contacts intact mucous membranes but which does not ordinarily penetrate the blood barrier or otherwise enter normally sterile areas of the body. This product may be used to pre-clean or decontaminate critical or semi-critical medical devices prior to sterilization or high-level disinfection.

## Bracketed [] Text Optional

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### **A. To disinfect non-porous, hard surfaces such as stainless steel or hard-surface equipment, glazed tile floors, walls, ceilings, stainless steel cold rooms and walk-in incubators:**

1. Activate *Selectroicide*®5G [1G, 12G, 12G MultiPack-15] [SelectroFresh 12G Food Processing] according to "Directions for Use" on package label.
2. Clean all surfaces thoroughly with a suitable detergent and rinse with water prior to disinfection.
3. Prepare a 100 ppm solution of activated *Selectroicide*®5G [1G, 12G] OR prepare a 500 ppm solution [1G, 5G, 12G, or 12G MultiPack-15] [SelectroFresh 12G Food Processing] and use a 1:5 dilution device (one part 500 ppm solution to four parts water).
4. Spray, mop or sponge the 100 ppm solution onto surfaces to be disinfected. All surfaces must be visibly wet for at least ten (10) minutes. When spraying disinfectant solution, use an appropriate spraying device. When applying these solutions using a high-pressure sprayer, wear a NIOSH/MSHA-approved respirator appropriate for chlorine dioxide.
5. After disinfecting, allow surfaces or equipment to air dry. Do not reuse solution. Do not rinse disinfected surfaces.
6. Dispose of package and spent envelope according to instructions on package label.

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### **B. To disinfect equipment tops, bench tops, biological hoods, incubators, stainless steel equipment and instruments:**

1. Activate *Selectroicide*®5G [1G, 12G, 12G MultiPack-15] [SelectroFresh 12G Food Processing] according to "Directions for Use" on package label.
2. Clean all surfaces thoroughly with a suitable detergent and rinse with water prior to disinfection.
3. Prepare a 100 ppm solution of activated *Selectroicide*®5G [1G, 12G] OR prepare a 500 ppm solution [1G, 5G, 12G, or 12G MultiPack-15] [SelectroFresh 12G Food Processing] and use a 1:5 dilution device (one part 500 ppm solution to four parts water).
4. Spray, mop or sponge the 100 ppm solution onto surfaces to be disinfected. All surfaces must be visibly wet for at least ten (10) minutes. When spraying disinfectant solution, use an appropriate spraying device. When applying these solutions using a high-pressure sprayer, wear a NIOSH/MSHA-approved respirator appropriate for chlorine dioxide.
5. After disinfecting, allow surfaces or equipment to air dry. Do not reuse solution. Do not rinse disinfected surfaces.
6. Dispose of package and spent envelope according to instructions on package label.

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### **C. To disinfect commercial animal confinement facilities such as poultry houses, swine pens, calf barns and kennels:**

1. Activate *Selectroicide*®5G [1G, 12G, 12G MultiPack-15] according to "Directions for Use" on package label.
2. Remove all animals and feed from facility to be disinfected.
3. Remove all litter and manure from floors, walls and surfaces of barns, pens, stalls, chutes and other structures occupied or traversed by animals.
4. Empty all troughs, racks and other feeding and watering appliances.
5. Prepare a 100 ppm solution of activated *Selectroicide*®5G [1G, 12G] in accordance with instructions above OR prepare a 500 ppm solution [1G, 5G, 12G, or 12G MultiPack-15] and use a 1:5 dilution device (one part 500 pm solution to four parts water).

#### **FOR GENERAL APPLICATION WITH SPRAYER:**

6. With soap or detergent, thoroughly clean all surfaces and rinse with water.
7. Using a commercial sprayer, saturate all surfaces with the solution keeping visibly wet for a period of at least ten (10) minutes. When applying these solutions using a high-pressure sprayer, wear a NIOSH/MSHA-approved respirator appropriate for chlorine dioxide.
8. After treatment, ventilate buildings, coops or other enclosed spaces before reentering. Do not house poultry or employ equipment until treatment has been absorbed, set, or dried.

#### **AS A DISINFECTING SOAK:**

6. With soap or detergent, thoroughly clean halters, ropes or other types of equipment used in handling and restraining animals and forks, shovels and scrapers used in removing litter and manure. Rinse with water.
7. Fill container or vat with 100 ppm solution, and immerse items for a period of at least ten (10) minutes.
8. Discard solution in sanitary drain or as ordinary non-hazardous waste. Do not reuse solution.
9. Thoroughly scrub treated feed racks, troughs, automatic feeders, fountains and waterers with soap or detergent and rinse with potable water before reuse.
10. Dispose of package and spent envelope according to instructions on package label.

## DISINFECTANT FOR BEVERAGE AND WATER SYSTEMS AND LINES

**To disinfect lines, holding tanks and other equipment used in fountain drink or other beverage preparation, storage, transfer and dispensing operations or to disinfect the lines and storage tanks of potable water storage systems aboard aircraft, boats and RVs (clean-in-place applications):**

Prior to disinfecting, tanks should be cleaned and then flushed thoroughly with clean, potable water.

### FOR A TEN (10) MINUTE OR LONGER DISINFECTION

1. Activate *Selectrocide*®5G [1G, 12G, 12G MultiPack-15] [SelectroFresh 12G Food Processing] according to "Directions for Use" on package label.
2. Prepare a 100 ppm solution of activated *Selectrocide*®5G [1G, 12G] [SelectroFresh 12G Food Processing] prepare a 500 ppm solution [1G, 5G, 12G,, or 12G MultiPack-15] [SelectroFresh 12G Food Processing] and use a 1:5 dilution device (one part 500 ppm solution to four parts water).
3. **Fill tank completely with 100 ppm solution** (filling the tank completely may require activation of several 5G [1G, 12G] [SelectroFresh 12G Food Processing] envelopes, or a single 12G MultiPack-15). Run solution through transfer lines and appliances until green solution appears at the outlets. Top-off tank with solution. Circulate or let stand in tank and lines for at least ten (10) minutes
4. Drain tanks and lines. Rinse with potable water.
5. Dispose of package and spent envelope according to instructions on package label.

### FOR A TWENTY (20) MINUTE OR LONGER DISINFECTION

1. Activate *Selectrocide*®5G [1G, 12G, 12G MultiPack-15] [SelectroFresh 12G Food Processing] according to "Directions for Use" on package label.
2. Prepare a 50 ppm solution of activated *Selectrocide*®5G [1G, 12G] OR prepare a 500 ppm solution [1G, 5G, 12G, or 12G MultiPack-15] [SelectroFresh 12G Food Processing] and use a 1:10 dilution device (one part 500 ppm solution to nine parts water), OR, if initial activation was to 100 ppm directly, use a 1:2 dilution device (one part 100 ppm solution to one part water).
3. **Fill tank completely with 50 ppm solution** (filling the tank completely may require activation of several 5G [1G, 12G] [SelectroFresh 12G Food Processing] envelopes or a single 12G MultiPack-15). Run solution through transfer lines and appliances until green solution appears at the outlets. Top-off tank with solution. Circulate or let stand in tank and lines for at least twenty (20) minutes.
4. Drain tanks and lines. Rinse with potable water.
5. Dispose of package and spent envelope according to instructions on package label.

# ANTIMICROBIAL AND GENERAL CLEANING APPLICATIONS FOR WATER LINES AND TANKS IN POTABLE WATER SYSTEMS

**This product will reduce microbial populations in the potable water holding tanks and lines of recreational vehicles (RV) and boats; in marine and RV wastewater tanks and lines; and fountain drink or other beverage preparation, storage, transfer and dispensing lines and equipment, and in coolers, thermoses, plastic water bottles, and other water-storing and dispensing systems used for picnics, camping, and other recreational activities. In addition, it will clean, eliminate odors, and remove organic matter. These uses must be followed by a potable water rinse.**

NOTE: If the tank system is cleaned frequently, then consider the level of contamination to be **low to moderate**. If the tank system is used heavily, notably fouled, cleaned irregularly, or going into or coming out of overwintering, then consider the tank(s) level of contamination to be **high**.

- Based on the judged level of contamination (see box above), determine the number of *Selectrocide*® 5G envelopes necessary to clean the drinking water system in accordance with the table below. Consider all interconnected tanks in the system as one. [For example: A system with two 250-gallon tanks has a total capacity of 500 gallons. At low to moderate contamination, use one (1) *Selectrocide*® 5G envelope; at high levels of contamination, use three (3) 5G envelopes.]

THEN, EITHER FOLLOW STEPS 2 and 3 OR STEPS 4 and 5

- Drain all water tanks completely. Then, refill tanks with water to approximately 10-20% of capacity (for example, a 250- gallon tank should be filled with 25 gallons of water).
- Activate the appropriate number of *Selectrocide*® 5G envelopes (see step 1 above, and note there is one envelope within each package) according to “Directions for Use” on package label by immersing the envelopes in the water tank, closing the tanks, and waiting ten (10) hours. Remove spent 5G envelopes from water, and close the tank.

**OR**

- Activate the appropriate number of *Selectrocide*® 5G envelopes (one envelope within each package. A single 5G is activated at full strength, 500 ppm, in 10 liters of water) in water according to the “Directions for Use” on package label and according to the following table:

5 FOR TANKS OF THIS OVERALL SIZE		AND WITH LOW to MODERATE LEVELS OF CONTAMINATION		AND WITH HIGH LEVEL OF CONTAMINATION		Concentration created
More than:	Less Than:	IMMERSE THIS NUMBER OF 5G ENVELOPES	IN THIS MUCH WATER	IMMERSE THIS NUMBER OF	IN THIS MUCH WATER	Low to moderate/ High
50 gallons	250 gallons	1	90 liters/25 gallons	1	90 liters/25 gallons	50ppm/50ppm
250 gallons	500 gallons	1	185 liters/50 gallons	2	185 liters/50 gallons	25ppm/50ppm
500 gallons	800 gallons	1	470 liters/125 gallons	3	284 liters/75 gallons	10ppm/50ppm
800 gallons	1100 gallons	2	947 liters/250 gallons	4	379 liters/100 gallons	10ppm/50ppm
1100 gallons	1300 gallons	2	947 liters/250 gallons	6	568 liters/150 gallons	10ppm/50ppm
1300 gallons	1600 gallons	3	568 liters/150 gallons	6	568 liters/150 gallons	25ppm/50ppm
1600 gallons	2000 gallons	4	750 liters/200 gallons	8	750 liters/200 gallons	25ppm/50ppm

- After (10) hours, remove and discard spent 5G envelopes according to package instructions, and add solution into the water tank. **Do not add additional water. Do not refill tank. Close the tank.**

Note: Verify concentration using Selective Micro® Test Strips. For concentrations above 10ppm, use Selective Micro® Wide Range test strips; for concentrations of 10ppm or less, use Selective Micro® Low Range test strips.

**THEN:**

6. Circulate the *Selectroicide*<sup>®</sup> 5G solution through all lines and within or between tanks using the system's pumps.
7. Run approximately 6 ounces of the *Selectroicide*<sup>®</sup> 5G solution through each outlet (faucet, shower etc.) and let the solution stand in the tanks and lines **OVERNIGHT** (or approximately 12 hours).
8. The next day, or after 12 hours, flush the *Selectroicide*<sup>®</sup> 5G solution through all faucets and outlets until the tanks are empty.
9. Refill the tanks with rinse water to approximately 10-20% of their capacity (e.g., 25 gallons per 250- gallons capacity).
10. Circulate the water and flush rinse water through all faucets and outlets until tanks are empty
11. Tanks are now cleaned and can be refilled for use or left empty for storage.
12. Dispose of package(s) and spent 5G envelope(s) according to instructions on package label

**FOR APPLICATIONS INVOLVING LARGER TANKS (UP TO 10,000-GALLON CAPACITY), USE THE 12G PRODUCTS AND FOLLOW THESE STEPS:**

1. Based on the judged level of contamination (see box at beginning of this application section), determine the number of *Selectroicide*<sup>®</sup> [12G, or ] [SelectroFresh 12G Food Processing] envelopes necessary to clean the tanks and lines in the water system according to the following table:

FOR TANKS OF THIS OVERALL SIZE		FILL WITH APPROXIMATELY THIS MUCH WATER (≈ 5-20% of capacity)	FOR LOW-MODERATE LEVELS OF CONTAMINATION IMMERSE THIS NUMBER OF G-SERIES ENVELOPES	Fill With APPROXIMATELY THIS MUCH WATER (≈ 5-20% of capacity)	FOR HIGH LEVELS OF CONTAMINATION IMMERSE THIS NUMBER OF G-SERIES ENVELOPES
More than:	Less Than:		12G and created concentration created [SelectroFresh 12G Food Processing]		12G and created concentration created [SelectroFresh 12G Food Processing]
50 gal.	500 gal.	227 liters/60 gal.	1 (50 ppm)	227 liters/60 gal.	1 (50 ppm)
500 gal.	1,000 gal.	454 liters/120 gal.	1 (25 ppm)	454 liters/120 gal.	2 (50 ppm)
1,000 gal.	1,500 gal.	454 liters/120 gal.	1 (25 ppm)	681 liters/180 gal.	3 (50 ppm)
1,500 gal.	2,000 gal.	909 liters/240 gal.	2 (25 ppm)	909 liters/240 gal.	4 (50 ppm)
2,000 gal.	2,500 gal.	909 liters/240 gal.	2 (25 ppm)	909 liters/240 gal.	4 (50 ppm)
2,500 gal.	3,000 gal.	909 liters/240 gal.	2 (25 ppm)	1136 liters/300 gal.	5 (50 ppm)
3,000 gal.	3,500 gal.	1,363 liters/360 gal.	3 (25 ppm)	1363 liters/360 gal.	6 (50 ppm)
3,500 gal.	4,000 gal.	1,363 liters/360 gal.	3 (25 ppm)	1590 liters/420 gal.	7 (50 ppm)
4,000 gal.	5,000 gal.	1817 liters/480 gal.	4 (25 ppm)	1817 liters/480 gal.	8 (50 ppm)
5,000 gal.	6,000 gal.	2271 liters/600 gal.	5 (25 ppm)	2271/600 gal.	10 (50 ppm)
6,000 gal.	7,500 gal.	2726 liters/720 gal.	6 (25 ppm)	2726/720 gal.	12 (50 ppm)
7,500 gal.	10,000 gal.	3180 liters/840 gal.	7 (25 ppm)	3634 liters/960 gal.	16 (50 ppm)

Note: Verify concentration using Selective Micro<sup>®</sup> Test Strips. For concentrations above 10ppm, use Selective Micro<sup>®</sup> Wide Range test strips; for concentrations of 10ppm or less, use Selective Micro<sup>®</sup> Low Range test strips.

2. Drain all water tanks completely. Then, refill tanks to approximately 10-20% of capacity with potable water. *For example*, put 50 gallons (approximately 185 liters) of water in a tank of 500-gallon capacity and 250 gallons (approximately 945 liters) of water in a tank of 2,500-gallon capacity. Immerse the number of [12G] [SelectroFresh 12G Food Processing] envelopes determined in step 1 above in the water tank. **Do not add additional water. Do not refill tank. Close the tank.**
3. Wait 10 hours [2 hours] [4 hours] for the [12G] to generate, and then remove the spent envelopes. Close the tank. Discard envelopes according to the instructions on the package label.
4. Circulate the *Selectroicide*® [12G] [SelectroFresh 12G Food Processing] solution through all lines and within or between tanks using the system's pumps.
5. Run approximately 6 ounces of the *Selectroicide*® [12G] [SelectroFresh 12G Food Processing] solution through each outlet (faucet, shower etc.) and let the solution stand in the tanks and lines **OVERNIGHT** (approximately 12 hours).
6. The next day, or after twelve hours, flush the *Selectroicide*® [12G] [SelectroFresh 12G Food Processing] solution through all faucets and outlets until the tanks are empty.
7. Refill the tanks with rinse water to approximately 10% of their capacity.
8. Circulate the water and flush rinse water through all faucets and outlets until tanks are empty.
9. Tanks are now cleaned and can be refilled for use or left empty for storage
10. Dispose of package(s) and spent [12G] [SelectroFresh 12G Food Processing] envelope(s) according to instructions on package label.

## HORTICULTURAL DISINFECTANT, SANITIZER, ALGAECIDE, FUNGICIDE AND SLIME REMOVER/INHIBITER

**Treats/Controls/Inhibits: Algae (*Phormidium boneri*) and Fungi (*Penicillium digitatum*), [*Botrytis sp.*], [*Fusarium solani*], *Pythium aphanidermatum*, *Pythium irregulare*, *Fusarium oxysporum f. sp. basilicum* (Fob))**

This product, when used as directed:

- (1) disinfects non-porous hard surfaces, pots, flats, flower buckets and cutting tools;
- (2) sanitizes non-porous hard surfaces, racks, stands, work areas, benches and cutting tools;
- (3) removes or inhibits (under continuous treatment) re-establishment of slime in irrigation/transfer lines and systems;
- (4) treats, controls and prevents build-ups of soil-borne plant diseases and other algae, fungi and attendant slimes, on: soils used to grow nursery stocks, bedding plants, flowering plants and ornamentals; on cut flowers and other cuttings, seedlings and seeds; and on and within greenhouse equipment and structures such as irrigation/transfer lines and systems, pots, floors, ventilation ducts and equipment, storage rooms, growing tables, evaporative coolers, plastics, benches and flower pots; and
- (5) controls bacterial counts, maintains freshness, and extends shelf life for cut flowers.

**NOTE: Do not use at concentrations higher than those recommended for each application.** When applied directly to plants, seeds, cuttings or flowers as directed, *Selectroicide*®5G [1G, 12G, 12G MultiPack-15] [SelectroFresh 12G Food Processing] does not cause adverse cosmetic effects, as testing has demonstrated. However, testing has not been performed on EVERY plant species, and users are advised to spot-test *Selectroicide*®5G [1G, 12G, 12G MultiPack-15] [SelectroFresh 12G Food Processing] before applying it widely.

**Active solution may be irritating if breathed. If applying solution inside greenhouse or enclosed area using a high-pressure sprayer, wear a NIOSH/MSHA-approved respirator appropriate for chlorine dioxide: after treatment, ventilate greenhouse**

**OPTIONAL DILUTION INSTRUCTIONS FOR HORTICULTURAL SETTINGS:** The following dilution chart is consistent with the other dilution instructions contained in this technical bulletin. It is tailored to the typical dilution ratios of 1:5, 1:10 and 1:200 necessary for some horticultural applications. Use this chart, or dilution instructions presented elsewhere, most compatible with available dilution devices.

OPTIONAL DILUTION INSTRUCTIONS DESIGNED FOR DILUTION RATIOS REQUIRED TYPICALLY IN GREENHOUSES AND HORTICULTURAL SETTINGS			
To achieve a final chlorine dioxide concentration of :	Use a single Selective Micro Envelope of this size:	Activated in this many gallons or liters of water:	And apply using a device with an injection ratio of :

100 ppm	1G	2 liters	1:5
100 ppm	5G	12.5 gal	Undiluted
100 ppm	12G	30 gal	Undiluted
[100 ppm	SelectroFresh 12G Food Processing	30 gal	Undiluted]
50 ppm	1G	2 liters	1:10
50 ppm	1G	20 liters	Undiluted
50 ppm	5G	25 gal	Undiluted
50 ppm	5G	2.5 gal	1:10
50 ppm	12G	6 gal	1:10
[50 ppm	SelectroFresh 12G Food Processing	6 gal	1:10]
20 ppm	1G	50 liters	Undiluted
20 ppm	5G	62.5 gal <sup>3</sup>	Undiluted
20 ppm	12G	15 gal	1:10
[20 ppm	SelectroFresh 12G Food Processing	15 gal	1:10]
5 ppm	1G	200 liters	Undiluted
5 ppm	5G	250 gal	Undiluted
0.25 ppm	1G	4,000 liters	Undiluted
0.25 ppm	5G	25 gal	1:200
0.25 ppm	12G	60 gal <sup>4</sup>	1:200
[0.25 ppm	SelectroFresh 12G Food Processing	60 gal	1:200]
0.25 ppm	12G MultiPack-15	950 gal	1:200

Note: Verify concentration using Selective Micro® Test Strips. For concentrations above 10ppm, use Selective Micro® Wide Range test strips; for concentrations of 10ppm or less, use Selective Micro® Low Range test strips.

*3 Exceeds capacity of 55-gallon drum; activating the 5G in a 55-gallon drum will yield an application solution at a concentration of about 24 ppm—effective, but higher than necessary.*

*4 Exceeds capacity of 55-gallon drum; activating in a 55-gallon drum, and diluting with a 1:200 injection device, will yield an application solution at a concentration of about 0.29 ppm—effective, but higher than necessary.*

### **A. To disinfect non-porous hard surfaces, including stainless steel, glazed tile, sealed concrete, and sealed, finished wood used in horticultural applications:**

1. Activate *Selectocide*® 5G [1G, 12G, 12G MultiPack-15] [SelectroFresh 12G Food Processing] according to “Directions for Use” on package label.
2. Pre-clean all surfaces prior to application of disinfectant solution. Sweep and remove all plant debris. Use power sprayer to wash all surfaces to remove loose dirt.
3. Prepare solutions in indicated concentrations and ensure surfaces are wetted and remain visibly wet for the times noted below in the instruction number 6 associated with the desired application.

4. Dispose of package and spent envelope according to directions on package label.

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#### **FOR WORK AREAS, BENCHES AND EVAPORATIVE COOLERS**

1. Prepare a 100 ppm solution of *Selectroicide*<sup>®</sup> 5G [1G, 12G] [SelectroFresh 12G Food Processing] OR prepare a 500 ppm solution [1G, 5G, 12G,, or 12G MultiPack-15] [SelectroFresh 12G Food Processing] and use a 1:5 dilution device (one part 500 ppm solution to four parts water).
2. Spray or swab work area and bench surfaces with the 100 ppm solution before each work period and again after each planting is completed to help control the transfer of diseases. Spray or swab evaporative cooler surfaces, ensuring visible wetness for at least ten (10) minutes. When applying these solutions using a high-pressure sprayer, wear a NIOSH/MSHA-approved respirator appropriate for chlorine dioxide.

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#### **FOR POTS, FLATS, FLOWER BUCKETS AND CUTTING TOOLS**

##### **FOR A TEN (10) MINUTE OR LONGER DISINFECTION**

1. Prepare a 100 ppm of *Selectroicide*<sup>®</sup> 5G [1G, 12G] [SelectroFresh 12G Food Processing] OR prepare a 500 ppm solution [1G, 5G, 12G, or 12G MultiPack-15] [SelectroFresh 12G Food Processing] and dilute by adding one part 500 ppm solution to four parts water.
2. Brush or wash used pots and flats, and then soak in the 100 ppm solution for at least ten (10) minutes before reuse to help control transfer of diseases. Soak tools with 100 ppm solution for at least ten (10) minutes to help control the transfer of disease.

At end of workday, dry and oil tools.

##### **FOR A TWENTY (20) MINUTE OR LONGER DISINFECTION**

1. Prepare a 50 ppm solution of *Selectroicide*<sup>®</sup> 5G [1G, 12G] [SelectroFresh 12G Food Processing] in accordance with the instructions above OR prepare a 500 ppm solution [1G, 5G, 12G, or 12G MultiPack-15] [SelectroFresh 12G Food Processing] and dilute by adding one part 500 ppm solution to nine parts water, OR, if initial activation was to 100 ppm directly, use a 1:2 dilution device (one part 100 ppm solution to one part water).
2. Brush or wash used pots and flats and then soak in the 50 ppm solution for at least twenty (20) minutes before reuse to help control transfer of diseases. Soak tools with 50 ppm solution for at least twenty (20) minutes to help control the transfer of disease. At end of workday, dry and oil tools.

#### **B. To sanitize work area non-porous (non-food contact) hard surfaces, hard-surface benches, pots, flats, flower buckets and cutting tools:**

1. Activate *Selectroicide*<sup>®</sup> 5G [1G, 12G, 12G MultiPack-15] [SelectroFresh 12G Food Processing] according to "Directions for Use" on package label.
2. Pre-clean all surfaces prior to application of sanitizing solution. Sweep and remove all plant debris. Use power sprayer to wash all surfaces to remove loose dirt.
3. Prepare a 20 ppm solution of *Selectroicide*<sup>®</sup> 5G [1G, 12G] [SelectroFresh 12G Food Processing] or prepare a 500 ppm solution [1G, 5G, 12G, or 12G MultiPack-15] [SelectroFresh 12G Food Processing] and use a 1:25 dilution device or add one part 500 ppm solution to 24 parts water.
4. Brush or wash used pots and flats then swab or soak in the 20 ppm solution for at least five (5) minutes before reuse to help control transfer of diseases. Spray, swab or soak tools with 20 ppm solution for at least five (5) minutes to help control the transfer of disease. Spray or swab work area and bench surfaces before each work period and again after each plant is completed to help control the transfer of diseases.
5. Dispose of package and spent envelope according to instructions on package label. At end of workday, dry and oil tools.

**C. As a dip to control and suppress bacteria [(*Erwinia chrysanthemi*)], algae (such as *Phormidium boneri*) and fungi [(such as *Penicillium digitatum*, *Botrytis sp.*, *Fusarium solani*)] on rooted or unrooted cuttings and cut flowers:**

1. Activate *Selectrocide*® 5G [1G, 12G, 12G MultiPack-15] [SelectroFresh 12G Food Processing] according to "Directions for Use" on package label
2. Prepare a 5 ppm solution of *Selectrocide*® 5G [1G, 12G] [SelectroFresh 12G Food Processing] OR prepare a 500 ppm solution [1G, 5G, 12G, or 12G MultiPack-15] [SelectroFresh 12G Food Processing] and use a 1:100 dilution device or add one part 500 ppm solution to 99 parts water.
3. Briefly dip cuttings or cut flowers in 5 ppm solution, ensuring they remain visibly wet with solution for at least one minute.
4. Dispose of package and spent envelope according to instructions on package label.

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**D. As a dip or drench to control and suppress bacteria [(*Erwinia chrysanthemi*)], including algae (*Phormidium boneri*) and fungi [(*Penicillium digitatum*, *Botrytis sp.*, *Fusarium solani*,] *Pythium aphanidermatum*, *Pythium irregulare*, *Fusarium oxysporum f. sp. Basilicum (Fob)*) in seed-bed soil and planting cubes:**

1. Activate *Selectrocide*® 5G [1G, 12G, 12G MultiPack-15] [SelectroFresh 12G Food Processing] according to "Directions for Use" on the package label.
2. Prepare a 5 ppm solution of *Selectrocide*® 5G [1G, 12G] [SelectroFresh 12G Food Processing] OR prepare a 500 ppm solution [1G, 5G, 12G, or 12G MultiPack-15] [SelectroFresh 12G Food Processing] and use a 1:100 dilution device or add one part 500 ppm solution to 99 parts water.
3. Immerse or drench seed-bed soil or planting cubes and allow to remain visibly wet with solution for ten (10) minutes
4. Dispose of package and spent envelope according to instructions on package label.

Soil or planting cubes can be seeded or planted immediately after treatment.

**E. For removing slime and retarding its reemergence; for antimicrobial applications involving algae (*Phormidium boneri*) and fungi [(*Penicillium digitatum*, *Botrytis sp.*, *Fusarium solani*,] *Pythium aphanidermatum*, *Pythium irregulare*, *Fusarium oxysporum f. sp. Basilicum (Fob)*); and for continuous treatment to inhibit their re-establishment in irrigation systems, flood floors, flooded benches, misting systems, humidification systems, recycled water systems and capillary mats:**

1. Activate *Selectrocide*® 5G [1G, 12G, 12G MultiPack-15] [SelectroFresh 12G Food Processing] according to "Directions for Use" on package label.
2. Pre-clean all surfaces prior to application of disinfectant solution. Sweep and remove all plant debris. Use power sprayer to wash all surfaces to remove loose dirt.
3. Prepare solutions in concentrations indicated below and ensure surfaces are wetted and remain visibly wet for the times or are applied continuously as noted below.
4. Dispose of package(s) and spent envelope(s) according to instructions on package label.

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**AS AN INITIAL OR REMEDIAL TREATMENT TO DISINFECT WATER HOLDING TANKS AND IRRIGATION/TRANSFER LINES (CLEAN-IN-PLACE APPLICATION)**

1. Flush tank thoroughly with clean water. Activate *Selectrocide*® 5G [1G, 12G, 12G MultiPack-15] [SelectroFresh 12G Food Processing] according to "Directions for Use" on package label.
2. Prepare a 50 ppm solution of activated *Selectrocide*® 5G [1G, 12G] [SelectroFresh 12G Food Processing] OR prepare a 500 ppm solution [1G, 5G, 12G, or 12G MultiPack-15] [SelectroFresh 12G Food Processing] and use a 1:10 dilution device (one part 500 ppm solution to nine parts water).

3. Fill tank completely. Run 50 ppm solution through irrigation/transfer lines and appliances until green solution appears at the outlets. Top-off tank with solution. Circulate or let stand in tank and lines for at least twenty (20) minutes.
4. Drain tanks and lines, flush with clean water, and resume normal operation.

**AS AN INITIAL OR REMEDIAL TREATMENT TO DISINFECT AND REMOVE SLIME, ALGAE AND FUNGI FROM WATER HOLDING TANKS AND IRRIGATION/TRANSFER LINES (CLEAN-IN-PLACE APPLICATION)**

1. Flush tank thoroughly with clean water. Activate *Selectroicide*<sup>®</sup> 5G [1G, 12G, 12G MultiPack-15] [SelectroFresh 12G Food Processing] according to "Directions for Use" on package label.
2. Prepare a 50 ppm solution of activated *Selectroicide*<sup>®</sup> 5G [1G, 12G,] [SelectroFresh 12G Food Processing] Or prepare a 500 ppm solution [1G, 5G, 12G, or 12G MultiPack-15] [SelectroFresh 12G Food Processing] and use a 1:10 dilution device (one part 500 ppm solution to nine parts water).
3. Fill tank completely. Run 50 ppm solution through irrigation/transfer lines and appliances until green solution appears at the outlets. Top-off tank with solution. Circulate or let stand in tank and lines overnight (12 hours).
4. Drain tanks and lines, flush with clean water, and resume normal operation.

**FOR CONTINUOUS TREATMENT TO INHIBIT THE RE-ESTABLISHMENT OF SLIME, ALGAE, and FUNGI**

1. Prepare a 0.25 ppm solution of activated *Selectroicide*<sup>®</sup> 5G [1G, 12G] [SelectroFresh 12G Food Processing] OR prepare a 500 ppm solution [1G, 5G, 12G, or 12G MultiPack-15] [SelectroFresh 12G Food Processing] and use a 1:2,000 dilution device or add one part 500 ppm solution to 1,999 parts water.
2. Use the prepared 0.25 ppm solution to operate the water system following normal application procedures.

NOTE: Use ultra-low-range *Selective Micro*<sup>®</sup> Chlorine Dioxide Test Strips to verify concentration at downstream production points. Organic loads vary across water supplies, and will influence injection level necessary to ensure 0.25 ppm concentrations at emitter hoses, mist nozzles, and drip tubes.

**F. As an algaecide and fungicide for treating, preventing, suppressing and controlling horticultural diseases on hard, non-porous surfaces in commercial greenhouses, garden centers and nurseries:**

1. Activate *Selectroicide*<sup>®</sup> 5G [1G, 12G,, 12G MultiPack-15] [SelectroFresh 12G Food Processing] according to "Directions for Use" on package label.
2. Pre-clean all non-plant surfaces prior to application of solution. Sweep and remove all plant debris. Use power sprayer to wash all surfaces to remove loose dirt.
3. Prepare solutions in indicated concentrations and ensure all surfaces are wetted and remain visibly wet for the times noted below.
4. Dispose of package and spent envelope according to instructions on package label.

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**AS AN INITIAL OR REMEDIAL TREATMENT TO KILL ALGAE AND FUNGI ON HARD NON-POROUS SURFACES ON EQUIPMENT, GREENHOUSE STRUCTURES, GLAZING, PLASTIC, BENCHES, WALKWAYS, FLOORS, WALLS, FAN BLADES, VENTILATION DUCTS, WATERING SYSTEMS, COOLERS AND STORAGE ROOMS**

1. Prepare a 5 ppm solution of activated *Selectroicide*<sup>®</sup> 5G [1G, 12G] [SelectroFresh 12G Food Processing] OR prepare a 500 ppm solution [1G, 5G, 12G, or 12G MultiPack-15] [SelectroFresh 12G Food Processing] and use a 1:100 dilution device (one part 500 ppm solution to 99 parts water).
2. Apply the 5 ppm solution with mop, sponge or sprayer. When applying these solutions using a high-pressure sprayer, wear a NIOSH/MSHA-approved respirator appropriate for chlorine dioxide.
3. Visibly wet all surfaces and ensure the surfaces remain visibly wet for at least one hour.

Note: Heavy growths of algae or fungi may require scrubbing to remove dead growth.

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**AS A WEEKLY PREVENTATIVE TREATMENT TO KILL, CONTROL AND SUPPRESS FUNGI AND CONTROL AND SUPPRESS ALGAE ON HARD NON-POROUS SURFACES ON**

**EQUIPMENT, GREENHOUSE STRUCTURES, GLAZING, PLASTIC, BENCHES,  
WALKWAYS, FLOORS, WALLS, FAN BLADES, VENTILATION DUCTS, WATERING  
SYSTEMS, COOLERS AND STORAGE ROOMS**

1. Prepare a 5 ppm solution of activated *Selectrocide*<sup>®</sup> 5G [1G, 12G] [SelectroFresh 12G Food Processing] in accordance with instructions above OR prepare a 500 ppm solution [1G, 5G, 12G, or 12G MultiPack-15] [SelectroFresh 12G Food Processing] and use a 1:100 dilution device (one part 500 ppm solution to 99 parts water).
2. Apply 5 ppm solution with mop, sponge or sprayer. When applying these solutions using a high-pressure sprayer, wear a NIOSH/MSHA-approved respirator appropriate for chlorine dioxide. Visibly wet all surfaces and ensure the surfaces remain visibly wet for at least one hour (kill/cidal) and at least one minute (suppression).

**G. As a dip to control and suppress bacteria [(*Erwinia chrysanthemi*)] on cuttings and cut flowers:**

1. Activate *Selectrocide*<sup>®</sup> 5G [1G, 12G, 12G MultiPack-15] [SelectroFresh 12G Food Processing] according to “Directions for Use” on package label.
2. Prepare a 5 ppm solution of activated *Selectrocide*<sup>®</sup> 5G [1G, 12G] [SelectroFresh 12G Food Processing] OR prepare a 500 ppm solution [1G, 5G, 12G, or 12G MultiPack-15] [SelectroFresh 12G Food Processing] and use a 1:100 dilution device (one part 500 ppm solution to 99 parts water).
3. Briefly dip cuttings or cut flowers in 5 ppm solution and ensure they remain visibly wet with solution for at least one minute.
4. Dispose of package and spent envelope according to instructions on package label.

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**H. To maintain freshness and extend shelf-life for cut flowers:**

1. Activate *Selectrocide*<sup>®</sup> 5G [1G, 12G, 12G MultiPack-15] [SelectroFresh 12G Food Processing] according to “Directions for Use” on package label.
2. Prepare a 5 ppm solution of *Selectrocide*<sup>®</sup> 5G [1G, 12G] [SelectroFresh 12G Food Processing] in accordance with instructions above OR prepare a 500 ppm solution [1G, 5G, 12G, or 12G MultiPack-15] [SelectroFresh 12G Food Processing] and use a 1:100 dilution device (one part 500 ppm solution to 99 parts water).
3. Unbundle the flowers to preclude bunching, and place in vase on display or in cold storage in the 5 ppm solution of chlorine dioxide. Solution may include 2% sucrose.
4. Refresh solution every 24 hours.
5. Dispose of package and spent envelope according to instructions on package label.

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**TO EXTEND SHELF-LIFE AND FRESHNESS OF FRUITS AND  
VEGETABLES IN FOOD PROCESSING FACILITIES**

**THIS PRODUCT WILL REDUCE CONCENTRATIONS OF SPOILAGE  
MICROBES ON RAW AGRICULTURAL COMMODITIES (RACs) INTENDED FOR  
COMMERCIAL FOOD PROCESSING.**

1. Activate *Selectrocide*<sup>®</sup> 5G [1G, 12G, 12G MultiPack-15] [SelectroFresh 12G Food Processing] according to “Directions for Use” on the package label.
2. Wash and thoroughly rinse fruits and vegetables with clean, potable water.
3. Prepare a 5 ppm solution of activated *Selectrocide*<sup>®</sup> 5G [1G, 12G] [SelectroFresh 12G Food Processing] OR prepare a 500 ppm solution [1G, 5G, 12G, or 12G MultiPack-15] [SelectroFresh 12G Food Processing] and use a 1:100 dilution device (one part 500 ppm solution to 99 parts water).

4. Apply the 5 ppm solution to fruits and vegetables by: either immersing/dipping in a tank of 5 ppm solution for 1 minute OR using an application-specific sprayer (the industry standard fan or cone spray nozzle pattern) to cover all surfaces evenly with a 5 ppm spray; surfaces should remain visibly wet for 1 minute. Replenish immersion solution at the rate of depletion; verify 5 ppm concentration using *Selective Micro<sup>®</sup> Chlorine Dioxide Test Strips*. Empty and wash immersion tanks with every shift change.
5. Follow application to fruits and vegetables with a potable water rinse or canning, blanching, or cooking.
6. Dispose of package and spent envelope according to instructions on package label.

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## ANTIMICROBIAL APPLICATIONS TO CONTROL THE BUILDUP OF MICROBES IN PROCESS WATERS FOR FRUITS AND VEGETABLES AND ASSOCIATED TANKS, FLUMES, AND LINES

**This product will inhibit microbial growth in water used to process fruits and vegetables.**

- NOTE:**
1. Replacement and replenishment intervals will vary with microbial challenge presented by fruits and vegetables treated. Selective Micro Technologies recommends a beginning concentration of 5 ppm, with adjustments to ensure a residual concentration between 0.25 and 5 ppm depending on microbial challenge and operation-unique factors.
  2. Apply chlorine dioxide solution continuously or intermittently to achieve a residual concentration level between 0.25 – 5.0 ppm.
  3. Regularly confirm concentration of process water using *Selective Micro<sup>®</sup> Chlorine Dioxide Test Strips* or other measurement means (e.g., Oxidation Reduction Potential (ORP) metering).

1. At regular intervals or before beginning a shift, clean tanks, flumes, and lines using normal procedures, and follow with potable water rinse. In conditions of severe microbial accumulation (or when slime is visible), it is advisable to treat the thoroughly cleaned system with an antimicrobial treatment before returning the system to normal operation. See *Selectrocide<sup>®</sup>*'s "Antimicrobial and General Cleaning Applications for Water Lines and Tanks in Potable Water Systems" for recommendations on cleaning tanks that are contaminated severely.
2. Determine the number of *Selectrocide<sup>®</sup>* envelopes necessary based on the capacity of the tank or system, anticipated replenishment/replacement cycle based on expected microbial loads, and specific application method—once-through or recycled. The optimal concentration necessary to ensure a residual concentration of between 0.25 and 5.0 ppm will vary across operations.

Generate stock 500 ppm external to the tank and meter the stock solution in adequate volume to raise the volumes of process water to the desired concentration via mechanical injection (recommended) or by batch-loading.

For "recycle" process designs, generate stock 500 ppm solution external to the tank and inject activated solution in sufficient volume to raise the process water to the desired concentration via mechanical injection (recommended) or by batch-loading.

Consult pages 1-2 of this Technical Bulletin for dilution instructions, or scale to application using the table below, which presents, as a starting point, the total volume of stock 5 ppm solution generated using a single package of each product in the G-series product line. For example, with a 1,000-gallon system capacity, two 12Gs would fill the system at 5 ppm — and leave an additional 270 gallons at 5 ppm in reserve.

**VOLUME OF 5 PPM SOLUTION USING  
SINGLE SELECTROCIDE<sup>®</sup> G-SERIES PRODUCT**

Selectrocide <sup>®</sup> G-Series Product	Volume of Water Specified To Generate 500 ppm Stock Solution	Volume of 5 ppm Solution Created Using a Single Selectrocide <sup>®</sup> Envelope

	Liters	Liters	Gallons <sup>5</sup>
1G	2	200	50
5G	10	1,000	265
12G	24	2,400	635
[SelectroFresh 12G Food Processing]	24	2,400	635]
12G MultiPack-15	360	36,000	9,510

<sup>5</sup> Rounded to nearest 5 gallons

Note: Verify concentration using Selective Micro® Test Strips. For concentrations above 10ppm, use Selective Micro® Wide Range test strips; for concentrations of 10ppm or less, use Selective Micro® Low Range test strips.

3. Activate *Selectroicide*® 5G [1G, 12G, 12G MultiPack-15] [SelectroFresh 12G Food Processing] according to "Directions for Use" on package label.
4. Prepare a 5 ppm solution of activated *Selectroicide*® 5G [1G, 12G] [SelectroFresh 12G Food Processing] OR prepare a 500 ppm solution with any of the G-series products and use a 1:100 dilution device (one part 500 ppm solution to 99 parts water) to achieve target concentration of 5 ppm.
5. Verify concentration of process solution using *Selective Micro*® Chlorine Dioxide Test Strips or other means. Adjust concentration by adding additional water if the concentration is above 5 ppm or by adding additional concentrate if below 5 ppm (or below desired concentration between 0.25 and 5.0 ppm).
6. Cover or enclose containers holding solution, and operate normally.
7. Check concentration at regular intervals using test strips or other means to ensure target concentration is maintained. Replenish solution as necessary to maintain target concentration.
8. At desired intervals, drain system, clean as necessary, and refill with freshly-activated solution.
9. Dispose of package and spent envelope according to instructions on package label.

## ANTIMICROBIAL TREATMENT FOR POULTRY DRINKING WATER

**This product will help control microorganisms in drinking water intended for poultry.**

**A. For systems that use automatic, on-demand metering/injection systems designed primarily for poultry (i.e., systems employing nipples or drip wells as the final water delivery device/method, usually situated in enclosed or protected structures):**

1. Activate *Selectroicide*® 5G [1G, 12G, 12G MultiPack-15] according to "Directions for Use" on product label.
2. If activation vessel is different from feeder tank, transfer stock solution (500 ppm) to feeder tank. To maintain concentration, ensure that feeder tank is covered.
3. Operate system according to standard operating protocol, using a 1:100 injection device (one part solution to 99 parts water) for a concentration of 5 ppm.
4. Confirm concentrations of stock solution (500 ppm) and end-use solution up to 5 ppm but not less than an application concentration sufficient to ensure a residual concentration of 0.25 ppm using *Selective Micro*® Chlorine Dioxide Test Strips.
5. Dispose of package and spent envelope according to instructions on package label.

Note: Clean and remove accumulations of organic matter in delivery lines on a regular basis. (See, for example, label and technical bulletin instructions for this product under the heading "Antimicrobial and General Cleaning Applications for Potable Water Systems")

## SANITIZING FINAL RINSE OF PRE-CLEANED OR NEW RETURNABLE OR NON-RETURNABLE CONTAINERS

**This product may be used as a final sanitizing rinse for plastic, glass or metal returnable and non-returnable bottles, cans, caps, kegs, and beverage containers.**

1. Activate Selectrocide®5G [1G, 12G, 12G MultiPack-15] according to "Directions for Use" on package label.
2. Wash bottles, cans or containers with detergent or cleaning solution and rinse with potable water.
3. Prepare a 30 ppm solution by activating Selectrocide®5G [1G, 12G] by preparing a 500 ppm solution [1G, 5G, 12G, or 12G MultiPack-15] and using a 6:100 dilution device (six parts 500 ppm solution to 94 parts water).

### TO ACTIVATE SELECTROCIDE® G-SERIES PRODUCTS DIRECTLY TO 30 PPM INSIDE A CLOSED CONTAINER:

Immerse the Selectrocide®1G in this amount of clean, potable water for at least two (2) hours; remove within 4 hrs.	Immerse the Selectrocide®5G in this amount of clean, potable water for at least ten (10) hours; remove within 48 hrs.	Immerse the Selectrocide®12G in this amount of clean, potable water for at least ten (10) hours; remove within 48 hrs.
42 liters (11 gallons)	167 liters (44 gallons)	400 liters (105 gallons)

Note: Verify concentration using Selective Micro® Test Strips. For concentrations above 10ppm, use Selective Micro® Wide Range test strips; for concentrations of 10ppm or less, use Selective Micro® Low Range test strips.

4. To apply: rinse interior and exterior surfaces with the 30 ppm solutions by spraying, sponging, swabbing, or swirling, or immersing in a manner that ensures the target surfaces become visibly wet, for a contact time of 30 seconds (including drying time). (If applying these solutions using a high-pressure sprayer, wear a NIOSH/MSHA-approved respirator appropriate for chlorine dioxide).
5. Allow to drain dry.

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## ANTIMICROBIAL AND GENERAL CLEANING USES FOR NON-POTABLE WATER APPLICATIONS INVOLVING RECIRCULATING WATER SYSTEMS (E.G., COOLING TOWERS, PAPER MILLS, AND DECORATIVE OR ORNAMENTAL FOUNTAINS)

This product will help remove, control and inhibit reemergence of slimes, algae, fungi, and other organic buildups in recirculating cooling water systems, including cooling towers and decorative or ornamental fountains. It can be used as a periodic treatment or during continuous operations in antimicrobial applications involving algae, fungi or bacteria.

1. Activate *Selectrocide*®[1G, 5G, 12G, 12G MultiPack-15] according to "Directions for Use" on package label.
2. Prepare a 500 ppm solution of activated *Selectrocide*®[1G, 5G, 12G, 12G MultiPack-15] in accordance with label instructions.
3. Where possible, pre-clean surfaces prior to application. Flush tanks or water system with clean water.
4. Apply/add the 500-ppm solution to the tank water or water stream at a point in the system or in a manner which minimizes turbulence and exposure to the air.
5. Dispose of package(s) and spent envelope(s) according to instructions on package label.

## **AS AN INITIAL OR REMEDIAL TREATMENT FOR RECIRCULATING COOLING WATER SYSTEMS, WATER HOLDING TANKS AND DECORATIVE AND ORNAMENTAL FOUNTAINS**

1. For each 1,000 gallons of cooling or fountain water add 10 gallons of the 500 ppm solution to achieve a 5 ppm residual chlorine dioxide level. Circulate water in normal operation of the system.
2. Check residual chlorine dioxide concentration using *Selective Micro® Chlorine Dioxide Test Strips*. If residual chlorine dioxide concentration is below 5 ppm, add additional 500 ppm solution until solution reaches 5 ppm; verify with *Test Strips*.
3. Repeat daily until desired results are achieved.

## **FOR CONTINUOUS TREATMENT TO INHIBIT THE RE-ESTABLISHMENT OF SLIME, ALGAE, OR FUNGI**

1. For each 1,000 gallons of cooling or fountain water add 1 gallon of the 500 ppm solution to achieve approximately 0.5 ppm residual chlorine dioxide concentration. Circulate water in normal operation of the system.
2. Check residual chlorine dioxide concentration using *Selective Micro® Chlorine Dioxide Test Strips*. If residual chlorine dioxide concentration falls below 0.1 ppm, add more 500 ppm solution (about 1 gallon of the 500 ppm solution for each 1,000 gallons of cooling or fountain water) to increase the residual chlorine dioxide concentration to about 0.5 ppm. Verify concentration with *Test Strips*.

## **INSTRUCTIONS WHEN USING A DOSING PUMP AS AN INITIAL OR REMEDIAL TREATMENT FOR RECIRCULATING COOLING WATER SYSTEMS, WATER HOLDING TANKS AND DECORATIVE AND ORNAMENTAL FOUNTAINS**

1. For each 1,000 gallons of cooling or fountain water set the dosing pump to run a sufficient time to deliver approximately 10 gallons of the 500 ppm solution to the system.
2. Check residual chlorine dioxide concentration using *Selective Micro® Chlorine Dioxide Test Strips*. If residual chlorine dioxide concentration is below 5 ppm, add additional 500 ppm solution until solution reaches 5 ppm; verify with *Test Strips*.
3. Repeat daily until desired results are achieved.

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## **INSTRUCTIONS WHEN USING A DOSING PUMP FOR CONTINUOUS TREATMENT TO INHIBIT THE RE-ESTABLISHMENT OF SLIME, ALGAE, OR FUNGI**

1. Set the dosing pump to achieve a continuous concentration of chlorine dioxide between 0.25 ppm and 0.5 ppm. In order to maintain this concentration and the appropriate dosing, consider the volume of water in the system, half-life (makeup/blowdown rate), evaporative rate and windage loss of the system.
2. Check residual chlorine dioxide concentration using *Selective Micro® Chlorine Dioxide Test Strips*. If residual chlorine dioxide concentration falls below 0.25 ppm, increase the dosage rate.

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## **FOR PERIODIC TREATMENT TO INHIBIT THE RE-ESTABLISHMENT OF SLIME, ALGAE, OR FUNGI**

1. For each 1,000 gallons of cooling or fountain water add 1 gallon of the 500 ppm solution to achieve approximately 0.5 ppm residual chlorine dioxide concentration. Circulate water in normal operation of the system. Check residual chlorine dioxide concentration using *Selective Micro® Chlorine Dioxide Test Strips*.
2. Repeat weekly or on first indications of increased slime, algae or fungi.

## **DISINFECTION, SANITIZING, ANTIMICROBIAL AND GENERAL CLEANING APPLICATIONS FOR WINERIES**

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**This product will disinfect, sanitize, and clean winemaking equipment and environmental surfaces in wineries. It is effective against microbes and spoilage organisms on all non-porous surfaces including: picking bins, crushers, transfer lines/hoses/pipes, tanks, drains, pumps, presses, de-stemmers, sealed concrete floors and walls, steel cutting boards/surfaces, sumps, valves and tri-clover fittings, pruning shears, and steel wine barrels.**

- NOTE:** 1. For additional information on label applications or to discuss other winery-specific application issues, contact Selective Micro Technologies' service personnel.
2. This product does not produce Trichloroanisol (TCA) or precursor Trichlorophenol (TCP) by chemical reaction in red wine or in cooperage oak, and therefore does not contribute to the off odors associated with the former.

**A. Disinfecting and sanitizing applications for winery equipment and environmental surfaces (including all non-porous materials and surfaces, such as transfer hoses and pipes, and other items listed above):**

1. Activate *Selectrocide*<sup>®</sup>5G [1G, 12G, 12G MultiPack-15] [SelectroFresh 12G Food Processing] according to "Directions for Use" on package label.
2. **Disinfecting Applications.** For disinfecting applications, prepare a 100 ppm solution of activated *Selectrocide*<sup>®</sup>5G [1G, 12G] [SelectroFresh 12G Food Processing] directly in accordance with instructions above OR prepare a 500 ppm solution of *Selectrocide*<sup>®</sup>5G [1G, 12G, 12G MultiPack-15] [SelectroFresh 12G Food Processing] and use a 1:5 dilution device (one part 500 ppm solution to 4 parts water).  
**Sanitizing Applications on hard, food-contact surfaces.** For sanitizing applications on hard, food-contact surfaces, prepare a 5 ppm solution of activated *Selectrocide*<sup>®</sup>5G [1G, 12G] [SelectroFresh 12G Food Processing] directly in accordance with instructions above OR prepare a 500 ppm solution of *Selectrocide*<sup>®</sup>5G [1G, 12G, 12G MultiPack-15] [SelectroFresh 12G Food Processing] and use a 1:100 dilution device (one part 500 ppm solution to 99 parts water).  
**Sanitizing Applications on hard, non-food-contact surfaces.** For sanitizing applications on hard, non-food-contact surfaces, prepare a 20 ppm solution of activated *Selectrocide*<sup>®</sup>5G [1G, 12G] [SelectroFresh 12G Food Processing] directly in accordance with instructions above OR prepare a 500 ppm solution of *Selectrocide*<sup>®</sup>5G [1G, 12G, 12G MultiPack-15] [SelectroFresh 12G Food Processing] and use a 1:25 dilution device (one part 500 ppm solution to 24 parts water).
3. Apply to target surfaces with mop, sponge, or spray **OR** fill, flush, immerse or circulate in tanks, lines and equipment, ensuring surfaces remain visibly wet for the following contact times:
  - Disinfection (100 ppm): 10 minutes
  - Sanitizing hard food-contact surfaces (5 ppm): 1 minute
  - Sanitizing hard non-food contact surfaces (20 ppm): 5 minutes
4. Dispose of package and spent envelope according to instructions on package label

**B. For sanitizing and cleaning tanks and associated connections, pipes, and hoses:**

1. Activate *Selectrocide*<sup>®</sup>5G [1G, 12G, 12G MultiPack-15] [SelectroFresh 12G Food Processing] according to "Directions for Use" on product label.
2. Place the tank washer in the middle of the tank with the attached hose extending through the racking door. Cover door with plastic tarp.
3. Place all rubber gaskets inside the tank and leave bottom valve open to drain into tub.  
NOTE: Ensure man-door on top of tank is closed and bolted.
4. Place 50 gallons of warm (not hotter than 160°F) water into the sump. To water, add:
  - For tanks not heavily soiled: Add one scoop (about 2 pounds) of caustic (e.g., 270 Xtra)
  - For heavily soiled tanks: Add one scoop (about 2 pounds) of more aggressive caustic (e.g., 231 Xtra)
5. Turn on the pump and start the tank washer, running solution of caustic for about 20 minutes.
6. Check the inside surfaces of tank visually to ensure they are clean; if not, repeat steps 4-5.
7. Rinse the tank with cold water for 5 minutes.
8. Fill the tub with 50 gallons of warm (100°F or lower) water, and add one scoop (about 2 pounds) of citric acid to tub.
9. Add 2 liters of *Selectrocide*<sup>®</sup> stock solution (500 ppm) to achieve a 5 ppm concentration in tank.
10. Start the pump and tank washer, and run citric solution for 20 minutes.
11. After 20 minutes, use Selective Micro<sup>®</sup>Chlorine Dioxide Test Strips to determine concentration of chlorine dioxide. Discard solution if strips indicate less than 5 ppm. (If strips register 5 ppm, then solution can be reused to sanitize another tank.)
12. Drain tank of citric solution, and rinse with cold water for 5 minutes.
13. Restore system to the operating mode.
14. Dispose of package and spent envelope according to instructions on package label.